ATTRITION OF ARMY NURSE CORPS OFFICERS: LOOKING AT FACTORS THAT AFFECT RETENTION AND RECRUITMENT OF ARMY NURSE CORPS OFFICERS

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The U.S. Army Nurse Corps is short of its budgeted end strength and continues to have an increasing number of nurses leave the Army. This research studied the factors that influenced the attrition of Army nurses. In a survey of Army Nurse Corps officers that recently left active duty, more than 70 percent of the respondents stated they originally intended to stay in the military past their initial obligation. The analysis indicates that there is a direct relationship between deployment, increased OPTEMPO, leadership, limited and/or lack of incentive pay and special bonus, lack of compensation for extra hours work, civilian nursing shortage and the attrition of Army Nurse Corps officers. Senior nursing leadership must invest time and effort to teach, coach, mentor and understand junior officers because they can influence the young officers to accept Army goals, mores and objectives, and eventually yield to a greater sense of belonging and acceptance in the organization.

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The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

ABSTRACT

ATTRITION OF ARMY NURSE CORPS OFFICERS: LOOKING AT FACTORS THAT AFFECT RETENTION AND RECRUITMENT OF ARMY NURSE CORPS OFFICERS, by MAJ Pablito R. Gahol, 117 pages.

Nursing shortage has been a challenge for the U.S. Army Nurse Corps. Currently, it is short of its budgeted end strength and continues to have an increasing number of nurses leaving the Army. Additionally, the US Army Recruiting Command (USAREC) and the Reserve Officers' Training Corps (ROTC) are facing a challenge in meeting their recruitment goals. This research studied the factors that influenced the attrition of nurses in the Army. Additionally, it examined the correlation of the current deployment, increased OPTEMPO, the civilian nursing shortage and the influence of pay and benefits to recruitment and retention of Army nurses. Furthermore, analysis was conducted on what senior Army Nurse Corps leadership can do to prevent the attrition and to increase recruitment of nurses in the Army.

In a survey of Army Nurse Corps officers that recently left active duty, more than 70 percent of the respondents stated they originally intended to stay in the military past their initial obligation. The analysis indicates that there is a direct relationship between deployments, increased OPTEMPO, limited and/or lack of incentive pay and special bonus, lack of compensation for extra hours work, civilian nursing shortage and the attrition of Army Nurse Corps officers. Senior nursing leadership must invest time and effort to teach, coach, mentor and understand junior officers because they can influence the young officers to accept Army goals, mores and objectives, and eventually yield to a greater sense of belonging and acceptance in the organization.

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ACRONYMS

AECP	Army Enlisted Commissioning Program
AMEDD	Army Medical Department
AN	Army Nurse Corps
ANPP	Army Nurse Preceptorship Program
AOC	Area of Concentration
BES	Budgeted End-Strength
BSN	Bachelor of Science in Nursing
DOR	Date of Rank
FY	Fiscal Year
GWOT	Global War on Terrorism
MOS	Military Occupational Specialty
NCLEX-RN	National Council Licensure Exam for Registered Nurses
NSTP	Nurse Summer Training Program
OBC	Officers Basic Course
OBV	Obligated Voluntary Service
OEF	Operation Enduring Freedom
OIF	Operation Iraqi Freedom
OTSG	Office of the Surgeon General
REFRAD	Resignation from Active Duty Service
ROTC	Reserve Officers' Training Corps
TDA	Table of Distribution and Allowance
TOE	Table of Organization and Equipment
USAREC	United States Army Recruiting Command

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CHAPTER 1

INTRODUCTION

Combat medical readiness is the highest priority of the military health care system. With the war in Iraq and Afghanistan, the United States military must have sufficient and healthy forces to sustain the operations to win the global war on terrorism. Nursing assets are critical in ensuring the health and welfare of this fighting force. However, the United States military is in the midst of its own war, the nursing shortage and the attrition of junior officers. This nursing shortage problem in the United States military makes medical readiness questionable (Finfgeld 1991). This problem has been plaguing the Army Nurse Corps for several years.

The problem started in the mid-1990s, after the end of the Cold War, when the Army began its downsizing efforts. It set a goal of drawing down the force from 780,000 to 480,000. Many bases closed, and officers were encouraged to leave the service. Some were given substantial monetary incentives to leave. Moreover, the rate at which reserve commissioned officers on active duty were selected for retention, known as the voluntary indefinite status, the selection rate was only at 30 percent, therefore forcing many junior officers to involuntary leave the Army.

During the initial downsizing process, the Army thought that the rate of junior officers leaving the service was acceptable. However, the Army did not anticipate the continued attrition of company grade officers (captains and lieutenants) even after the draw down was over. Thomas Ricks from The *Washington Post* reported that “in 1989, at the tail end of the Cold War, 6.7 percent of Army captains left voluntarily” (2000a, A2).

Ricks also reported that in 1999, the number climbed to 10.6 percent, a 58 percent increase. By early 2000, the attrition rate climbed to 13 percent. The report that the company grade officers are leaving the Army in “droves” alarmed the senior leadership of the Army. Captains constitute the largest rank group in the Army, accounting for one-third of commissioned officers. With the current population of Active Competitive Category company grade officers now at 31,299 (Phlegar 2005), the Army must cut the attrition rate by nearly 350 officers a year in order to maintain a steady and healthy officer force.

The impact of the increased junior officer attrition has greatly affected the Army Medical Department (AMEDD), particularly the Army Nurse Corps. The mission of the AMEDD is to “conserve the fighting strength.” If the Army does not have enough nurses to fill military hospitals and medical units, then the medical department will not be able to properly fulfill its mission. The Army Medical Corps is already short of physicians in several specialties, and many nurses, such as family nurse practitioners and nurse anesthetist, are already augmenting the shortage of these medical corps officers. Like their civilian medical counterparts, it is essential for the AMEDD to have an adequate number of nursing professionals to maintain a high standard of care.

Currently, there are 3,212 active-duty Army Nurse Corps officers. This is 203 nurses short of the 3,415-budgeted end strength (BES). This shortage is equivalent to staffing a 300-bed medical center. Additionally, the BES for fiscal year (FY) 2005 has been increased to 3,426 nurses. This means more nurses would be needed to fill the vacant slots. This shortage may not seem bad; however, in looking at the Army Nurse Corps attrition data reported by the Office of the Surgeon General (OTSG), a total of 668

captains and 102 lieutenants voluntarily resigned from active duty (REFRAD) between FY 2000 and FY 2004 (Christopher 2004). These numbers represented 82.8 percent and 12.6 percent of nurses that voluntarily resigned in this four-year period. This high-attrition rate of junior officers poses a concern to the senior Army leadership because the junior officers are typically the ones who are engaged in hands-on patient care. Like the Army Competitive Category, the Army Nurse Corps must cut the attrition rate in order to sustain a healthy corps of nurses.

Table 1 shows a comparison of the requirements and inventory according to Rank. Table 2 shows the comparison of the budgeted end-strength and inventory according to nursing specialties.

Table 1. Comparison of Requirement vs. Inventory

Rank	Requirement	Inventory	Percentage
COL	113	125	110.6
LTC	397	393	99.0
MAJ	731	731	100
CPT	1186	1080	91.1
LT	988	883	89.4
Total	3415	3212	94.1

Source: Army Nurse Corps Branch 2004.

Table 2. Comparison of the BES and Inventory Based on Nursing Specialties				
Nursing Specialty (AOC / ASI)	Authorized (How many AN are needed)	Inventory (How many AN are available)	Difference	Percentage (Inv/Auth)
66B Community Health Nurse	131	143	12	109.2%
66C Psychiatric Nurse	99	102	3	103%
66E Perioperative Nurse	332	322	(10)	97%
66F Nurse Anesthetist	276	197	(79)	71.4%
66H Medical-Surgical Nurse	1559	1449	(110)	92.9%
66H8A Critical Care Nurse	546	491	(55)	89.9%
66HM5 Emergency Room Nurse	95	148	53	155.8%
66G OB-Gyn Nurse	179	137	(42)	76.5%
66G8D Nurse Midwife	27	38	11	140.7%
66P Family Nurse Practitioner	171	185	14	108.2%
Total	3415	3212	(203)	94.1%

Source: Army Nurse Corps Branch 2004.

With a nursing shortage in the military and nationwide, remedial action is needed to address the issues related to the nursing workforce. In 2004, the US Army Recruiting Command (USAREC) and Reserve Officers' Training Corps (ROTC) accessed only 259 nurses as compared with 232 that left active duty (Richardson 2005; and Bryant 2004). The number of accessions will not be able to sustain a healthy force if the Army Nurse Corps continues to lose over 200 company grade nurses every year. The Army Nurse Corps needs to maintain an appropriate number of company grade officers to groom for future senior leadership positions.

The purpose of this thesis is to increase the understanding of the United States Army nursing shortage, and retention and recruitment issues particularly at the company-grade level. The author also explores the magnitude and consequences of this organizational problem, identifies and analyzes the major causes, and proposes a solution.

Primary and Secondary Research Questions

Primary Research Question: What factors influence the increased attrition of nurses in the United States Army Nurse Corps?

Secondary Research Questions:

1. Does the current deployment and increased OPTEMPO have an effect in the recruitment and retention in the Army?

2. Do pay and benefits influence the Army Nurse Corps officers' decisions to stay in the military?

3. Does the current civilian nursing shortage have an impact in the recruitment and retention of Army Nurse Corps officers?

4. What can the senior Army Nurse Corps leadership do to prevent the attrition and increase recruitment of nurses in the Army Nurse Corps?

Assumptions

The following assumptions underlie this study:

1. The survey participants are representations of the Army Nurse Corps company-grade officers who are currently on active duty.

2. The survey respondents are truthful with their answers.

Operational Definitions of Key Terms

Budgeted End-Strength (BES). The count of military nursing positions the Army needs to have funded in each fiscal year to accomplish all approved missions. This provides the basis for funded man years within the personnel system and provides the target for personnel plans, programs, and budgets.

Due Course Officer. An officer in a particular pay grade whose date of rank (DOR) in that grade falls within a specified period, who entered the Army as a second lieutenant and was promoted to each successive rank at a normal interval, that is, no promotion pass-over or accelerated (below the zone) promotion.

Non-Due Course Officer. An officer in a particular pay grade whose DOR in that grade falls within a specified period, who entered the Army with constructive credit for civilian or prior military experience and received promotions within that normal promotion interval, or who received promotion from above or below the promotion zone.

Table of Organization and Equipment (TOE). A table that prescribes the normal mission, organizational structure, and personnel and equipment requirements for a

military unit, and is the basis for an authorizations document. Example: military medical personnel assigned to a field medical unit.

Table of Distribution and Allowances (TDA). A table that prescribes the organizational structure, personnel, and equipment authorizations, and requirements of a military unit to perform a specific mission for which there is no appropriate table of organization and equipment. Example: military medical personnel assigned to a military medical center.

Limitations

Limitations in this research include a minimum of detailed analysis of the Army Nurse Corps Exit Questionnaire. The questionnaire results were obtained from the Army Nurse Corp Research Department who conducted the survey of officers that voluntarily resigned from active duty. This survey is limited only to Army Nurse Corps officers that have left the military without completing twenty years of service. No attempt was made to survey Army Nurse Corps officers who are still on active duty and are not planning to leave the military. A total adjusted study population of 491 was identified from FY 2002 until FY 2004. Final returns yielded 161 responses (32.8 %).

Methodology

This thesis uses a three step methodology to answer the questions. The first step is to conduct a literature review to determine causes and effects of the nursing shortage both in the military and civilian sectors.

The second step is to analyze the results of the Army Nurse Corps Exit Survey to determine the primary and most important reasons why these officers say they chose to leave active duty.

The third step is to conduct a series of interviews of subject matter experts from different organizations such as U.S. Army Recruiting Command (USAREC), U.S. Army Reserve Officers' Training Corps (ROTC), U.S. Army Human Resources Command (HRC), and the Office of the Surgeon General (OTSG) on some of the problems with the attrition, recruitment an retention of Army Nurse Corps officers and some ways to mitigate these problems.

Significance of the Study

Nurses are integral members of the multidisciplinary military health care system and their contributions are essential to the delivery of safe and effective care. Because of the potential negative impact the nursing shortage would bring to the organization, efforts must be taken and changes must be made to keep nurses, particularly company grade officers, from leaving the military. Several studies linked nursing shortage with negative outcomes such as increased mortality rates, adverse events after surgery, increased incidence of patient violence against staff, increase accident rates and patient injuries, and increased cross infection rates (Buchan and Calman 2004). To retain these personnel and to meet their needs, it is important for the Army Nurse Corps to identify the primary reasons why Army nurses, especially the junior officers, choose to leave active duty. Understanding of the reasons for attrition is important especially this time of increase operational tempo and deployments. U.S. Army nurses play a key role in the United States' success on the global war on terrorism.

Summary

The thesis will highlight the issues associated with the nursing shortage in the United States Army, its implications to the organization, and contributing factors leading

to the recruitment and retention problems in the Army Nurse Corps. By dissecting these issues, this study will contribute to the understanding of the link between attrition, deployment, and officer satisfaction. Understanding the factors leading to attrition may be used to build the relationship between the Army Nurse Corps and its junior officers and contribute to reducing the retention and recruitment problems. Additionally, understanding of the professional and personal development needs of the younger soldiers will be a key factor in the retention in the Army Nurse Corps junior officers. This thesis also will look at the national nursing shortage and its implications to the health systems. It is important to understand the problem with the civilian nursing shortage because of its effect on the recruitment and retention of Army Nurse Corps officers.

CHAPTER 2

ARMY NURSE CORPS

Description of the Army Nurse Corps
(Retrieved from Chapter 9, DA PAM 600-4, 9 June 1995)

The Army Nurse Corps, as described in the Chapter 9 of DA PAM 600-4 (1995), is a special branch of the Army composed of active Army and non-active Army commissioned officers who are graduates of an accredited nursing program acceptable to DA and who hold a current state license to practice as registered nurses. Army Nurse Corps officers integrate all components of nursing: clinical, administration, research, and education. Clinical nursing practice, however, is the foundation for nursing administration, research, and education. Army Nurse Corps officers are responsible for all facets of nursing related to the planning, delivery, management, operation, control, coordination, and evaluation of all nursing practice in all categories of the health care mission.

The mission of the Army Nurse Corps is to provide nursing leadership and quality nursing services in peace and in any contingency operation within a professional military system and in support of the mission of the AMEDD. To meet the readiness mission, the Army Nurse Corps is responsible and accountable for the provision of patient care and the supervision, direction, education and training, evaluation and control of Army Nurse Corps officers, enlisted personnel, and civilians engaged in nursing practice. The Army Nurse Corps also makes recommendations and plays a role concerning policies, programs, and operations of health care activities.

The overall scope of professional military nursing practice encompasses the following areas:

1. Directing and providing care in all environments through peace, humanitarianism, mobilization and deployment, war, nation-building assistance, and other contingencies.

2. Utilizing the nursing process by developing plans of care through assessing, diagnosing within nursing's scope of practice, planning, implementing, and evaluating.

3. Incorporating a scientific knowledge base, including physiology, pathophysiology, and psychosocial effects of disease, illness, and combat casualties.

4. Developing, applying, and evaluating standards of care, practice, and performance.

5. Exercising nursing judgment in clinical decision making by using sound ethical and moral basis for decision making.

6. Initiating emergency care based on professional knowledge, judgment, and skills; ensuring a safe patient care environment.

7. Creating a therapeutic environment for the physiological, psychological, social, cultural, and spiritual well being of patients, families, and health care providers, recognizing the disruptive effects of illness and hospitalization on the patient and family, and identifying stressors and coping strategies for patients and families.

8. Promoting respect for patient rights by maintaining confidentiality and providing privacy at all times.

9. Collaborating and coordinating with other health care providers in patient care management, making referrals to other health agencies and disciplines as appropriate,

ensuring nursing support of the medical plan of care, participating in diagnostic procedures and therapeutic regimes.

10. Directing and participating in the clinical process of case management (assessing, educating, planning, and delivering appropriate direct care as necessary) with the expected outcomes of improved patient outcomes, improved access to care, and reduced cost.

11. Documenting nursing care, patient management, and acuity data in accordance with regulations and policies.

12. Initiating, conducting, participating in, or applying research relevant to nursing practice.

13. Participating in quality improvement and risk management program development, implementation, and evaluation.

14. Educating self, staff, soldiers, patients, families, and other beneficiaries, providing anticipatory guidance concerning health and health care needs.

15. Promoting wellness and disease prevention among soldiers, patients, families, colleagues, and subordinates.

16. Communicating effectively in the military and health care environments.

17. Providing guidance and supervision to professional colleagues and nursing support staff for their professional growth and job satisfaction.

18. Evaluating self, staff, and nursing care comprehensively and without bias.

19. Participating in professional organization activities by interfacing with and contributing to the local, national, and/or international nursing community.

20. Keeping informed of political, military, economic, social and technological changes, particularly those that affect nursing and health care.

Appointment of Officers in the Army Nurse Corps

Reserve Officers' Training Corps

Reserve Officers' Training Corps (ROTC) program is the largest commissioning source of Army nurses. This is typically a four-year training program for college students and a two-year program for prior service soldiers with two years of college (Lewis 1998). College students majoring in nursing can compete for two-, three-, or four-year scholarships. This program is unique because officer cadets combine their nursing programs with military science electives. Additionally, they are given the opportunity to participate in the fully paid three-to-four week Nurse Summer Training Program (NSTP) allowing them to train with junior Army nurses in various military hospitals in the United States, Germany and Korea. During the NSTP clinical elective, the cadets receive "hands-on" experience under the direct supervision of a preceptor.

According to Colonel Elizabeth Bryant, Chief Nurse, ROTC Cadet Command, the criteria for the two-, three-, and four-year scholarships are the same no matter what the students' major. However, the nurse counselors review the application packets and establish an order of merit list based on scholarship allocations and matched available dollars. Scholarships available are between $20,000 and $23,000 per year. Bryant also added that the ROTC nurse mission has been 175 commissions and accessions for many years but increases to 225 in 2006, "to account for those who graduate but take a year to pass the NCLEX" (2004).

Direct Commission

Direct commissioning is available for individuals who have already completed their degrees in nursing, and have more than one year of nursing experience. To become a commissioned officer in the Army Nurse Corps, the individual must satisfy the following criteria: meet the prescribed medical and moral standards for appointment as a commissioned officer; and be a United States citizen or have a permanent visa. To qualify as a commissioned officer in the reserves, the candidate must have an associate's degree in nursing, or a three-year nursing diploma or a bachelor of science degree in nursing. For active duty status, the candidate must have a bachelor of science degree in Nursing (BSN) from an accredited school of nursing. All candidates must have a valid, unrestricted RN license; and must be between twenty-one and forty-six years of age (AN Branch 2004).

Army Enlisted Commissioning Program

The Army has a program that provides commissioning to soldiers without four-year college degrees. This is called the Army Enlisted Commissioning Program (AECP). Active duty Army enlisted soldiers in any MOS may qualify for the AECP. This is a board select process. Once selected, the applicant attends college on a full-time basis to complete the BSN program. The Army pays for tuition, books, and mandatory fees for up to twenty-four months of schooling. The candidate will receive full pay and allowances and may even be promoted while attending the program. The candidate will be commissioned as a second lieutenant upon attending the Officers Basic Course. Criteria for selection in the AECP are: have a minimum of three years and a maximum of ten years active federal service at the time of commissioning and degree completion. The

candidate must be able to complete the degree within twenty-four calendar months of beginning the program. The active duty service obligation for this program is three years (AN Branch 2004).

US Military Academy at West Point

Currently, the United States Military Academy does not have a nursing program. Some Army Nurse Corps officers complete their first two years of undergraduate studies at West Point and then transfer to another college or university to complete their nursing requirements.

Commissioned Officer Leader Development Phases
(Retrieved from Chapter 9, DA PAM 600-4, 9 June 1995)

The Army Nurse Corps officers go through four phases of leader development in their military career. These phases of leader development, as described in DA PAM 600-4, Chapter 9 (1995), are: initial, intermediate, advanced and senior executive phases, which include both nursing and military milestones. All phases depict assignment opportunities that can be expected during each phase and illustrate a progression of military education and professional training opportunities. Flexibility is expected in each phase, which also described certain broad objectives because the actual course of an officer's professional development and utilization is influenced by the Army requirements, the officer's own abilities, and demonstrated performance. The overall goals for Army Nurse Corps officer career development are to:

1. Facilitate maximum development and utilization of the officers' inherent abilities, aptitudes, acquired skills, and accumulated knowledge.

2. Prepare Army Nurse Corps officers to meet the unique requirements of military nursing.

3. Develop Army Nurse Corps officers capable of providing leadership in positions of responsibility within the organization structure.

4. Promote and maintain a highly competent officer corps to ensure nursing services that are efficient, effective, and capable of rapidly expanding to meet emergency faced by the AMEDD.

Initial Phase: Lieutenant and Captain

This phase commences upon entry on active duty. Newly commissioned officers attend the AMEDD Officers Basic Course. Initially, the officers are in an obligated service (OBV) status and then are considered for Regular Army status and promotions in accordance with the DA and AMEDD policies and regulations. Army Nurse Corps officers continue their military education by attending the AMEDD Captain's Career Course. Army Nurse Corps officers who are recent BSN graduates participate in the Army Nurse Corps Preceptorship Program (ANPP) at their first duty assignment after Officers Basic Course (OBC). Other nurses with civilian nursing experience but who are new to the military are also eligible to participate in the ANPP. Upon completion of the ANPP and when other course prerequisite qualifications are met, officers may apply for selection to attend specific areas of concentration (AOC) or skill producing courses.

Operational assignments for these officers predominantly focus on clinical practice in the role of clinical staff nurse in a TDA or TOE unit. Managerial skills are initially developed through the charge nurse role. These officers also assume additional duties as preceptor, unit in-service coordinator, or hospital committee member.

Intermediate Phase: Captain and Major

This phase continues the officer's professional development in the particular area

of specialty and increase responsibilities in officer leadership. Officers in the early stage of this phase must have already completed Officers Advanced Course, and towards the end of this stage, must have completed Command and General Staff College.

Obtaining a graduate degree is essential for Army nurses in order to continue the development of their nursing practice expertise. Officers at this level are also encouraged to apply for doctoral education. Officers should consider graduate level studies that have direct applicability to meet the needs of the Army Nurse Corps mission. They also are encouraged to consider certification and involvement in professional organizations. There also are a wide variety of operational assignments in the intermediate phase, which promote continued growth and leader development.

Advanced Phase: Lieutenant Colonel

This phase is for officers who pursue continued specialty and military professional development. Assignments at this phase are more challenging and require application of their managerial expertise, leadership abilities, and overall understanding of the military, Army Nurse Corps and AMEDD operations. Officers at this phase are expected to focus on continued advancement in professional nursing practice and military leadership. Operational assignments are based on the level of expertise and education of the officers. The assignments available for these officers require them to demonstrate advanced leadership capability for directing clinical practice and developing leadership skills in subordinate staff.

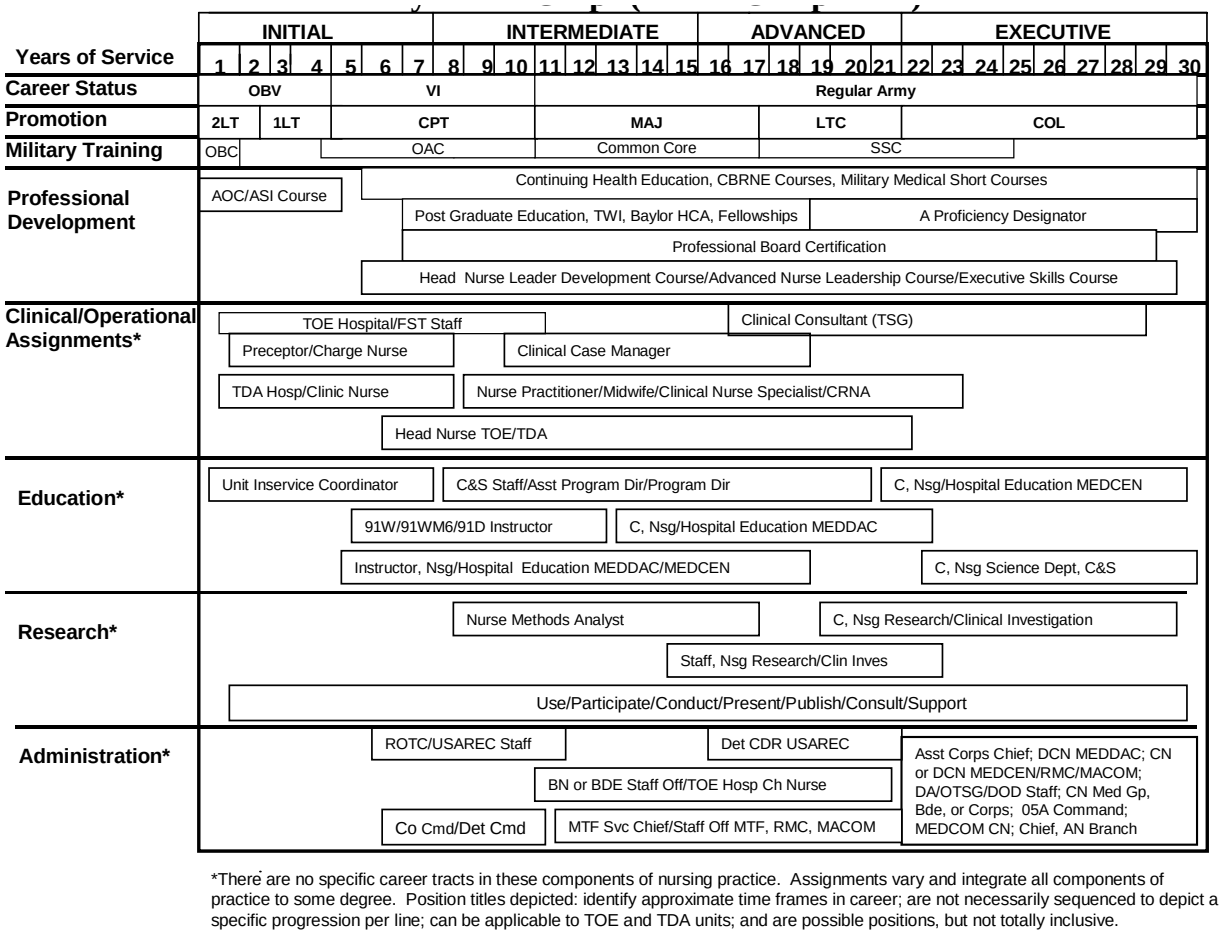
Executive Phase: Colonel

This phase requires maximum utilization of the officers' acquired professional and military abilities to include clinical expertise, leadership skills, and executive talents

in positions requiring highest level of responsibility and challenge. The Army Nurse Corps officers at this level are well-rounded experts who fully integrate nursing clinical practice, administration, research, and education in all activities. Thorough knowledge of Army and AMEDD operations is essential for officers in this phase of their career.

Army Nurse Corps officers in this phase are expected to provide leadership in nursing practice within the military environment, to foster and support officer development, and to identify and implement innovative and visionary strategies for the future of the Army Nurse Corps. They must support and optimize the opportunity for self-development of subordinate staff. Operational assignments for the officers in this phase maximize their capabilities to provide the highest leadership to the Army Nurse Corps, AMEDD, and the Army.

The Army Nurse Corps Life Cycle Model for career development further illustrates these four leader development phases (see figure 1). The model is adaptable both to due course and non-due course officers depending upon the officer's grade and years of commissioned service (DA PAM 600-4 1995).



*There are no specific career tracts in these components of nursing practice. Assignments vary and integrate all components of practice to some degree. Position titles depicted: identify approximate time frames in career; are not necessarily sequenced to depict a specific progression per line; can be applicable to TOE and TDA units; and are possible positions, but not totally inclusive.

Figure 1. Army Nurse Corps Life Cycle Model (Active Component)

Source: Army Nurse Corps Branch 2004.

Graduate Education and Training Opportunities

Every year, the Army Nurse Corps selects officers to pursue graduate education. Officers are provided a list of specialties for which they can apply for based on the needs of the Army Medical Department. The nurse corps officer can expect utilization assignments in research, clinical practice, management, education and staff roles following graduation. The Army Medical Department Center and School is responsible for paying the tuition for Army Nurse Corps officers assigned to civilian schools to

pursue a graduate education. The tuition cap is currently $3,000/semester or $2,250/quarter. Army Nurse Corps officers are encouraged to attend schools that fall within the cap, such as state colleges and universities from their home of record. However, an officer may attend higher cost schools if he/she sets up an agreement with the school to pay the difference between the cap and balance due. Officers selected are eligible for an annual allowance for books. However, the allowance usually does not cover the entire amount, so the officer should anticipate some out of pocket costs (AN Branch 2004).

The Department of the Army funds Nurse Corps officer graduate studies in the Army Anesthesia and Baylor Healthcare Administration Programs, while the Department of Defense funds Nurse Corps officers' attendance in Uniformed Services University of the Health Sciences (USUHS) programs. Officers attending these programs do not pay tuition. Officers receive all basic pay and benefits while in the program (AN Branch 2004).

Table 3 provides a list of specialties that the Army Nurse Corps supports as areas of study. The list of specialties includes the allotted time to pursue a particular program as well as the associated active duty service obligation (ADSO).

Table 3. Army Nurse Corps Specialty Programs		
Specialty	Length of Program	ADSO
Critical Care, CNS	21 months	4 years
Emergency/Trauma, CNS	21 months	4 years
Maternal Child, CNS	21 months	4 years
Medical Surgical, CNS	21 months	4 years
Nursing Administration	21 months	4 years
Nursing Informatics	21 months	4 years
Nursing Education	21 months	4 years
Psychiatric, CNS	21 months	4 years
Nurse-Midwifery	24 months	4 years
Public Health/ Community Health	24 months	4 years
Family Nurse Practitioner	24 months	4 years
Perioperative, CNS	24 months	4 years
Baylor Healthcare Administration	24 months	4 years
Anesthesia Nursing	30 months	4.5 years
Ph.D. Nursing	36 months	5 years
Ph.D. Sciences (CRNAs Only)	48 months	6 years

Source: Army Nurse Corps Branch 2004.

Nursing Specialty Training

The Army Nurse Corps is committed to providing opportunities to enhance the ability, interests, and knowledge of its officers. Army Nurse Corps officers may apply for the following specialty areas (U.S. Army AMEDD Department of Nursing Science 2004):

Community-Health Nursing (66B) - the nine-week Principles of Military Preventive Medicine course is designed to provide the entry-level skills and knowledge in preventive medicine specialty areas. Content includes community health practices, communicable and infectious diseases, epidemiology, statistics, medical entomology, industrial hygiene, health physics, sanitary engineering and environmental science as well as various specialty modules.

Psychiatric/Mental Health Nursing (66C) - provides specialized nursing services for emotionally distressed individuals and promotes mental health within the medical treatment facility and the adjacent military community. Nurses with this specialty perform liaison and consultative functions to ensure continuity of patient care. The requirement for this specialty is the completion of Area of Concentration (AOC) qualifying course in psychiatric nursing or one year of developmental experience in psychiatric nursing. The twenty-two-week Psychiatric Nursing course is designed to provide AN officers with the knowledge base and the clinical skills to deliver entry-level nursing care and treatment to psychiatric patients within the Table of Organization and Equipment (TO&E) and Table for Distribution and Allowances (TDA) settings. The course focuses on the integration of theory and current research into clinical practice; and

the development of individual management and leadership styles as both an office and a nurse.

Perioperative Nursing (66E) - performs specialized professional nursing duties in any phase of the operative process for patients undergoing all types of surgery and provides safe supplies and equipment for operative services. Criteria for this specialty are completion of 16-week perioperative nursing course or one year of supervised experience in operating room nursing. The Perioperative Nursing Course is designed to prepare the AN officer to function as entry-level staff nurse in the operating room. The course also focuses on the perioperative nurse's responsibilities in the preparation and sterilization of supplies and equipment; perioperative nursing aspects in special surgical fields; teaching role of the operating room staff nurse; and principles and techniques of supervision and management of an operating room.

Nursing Anesthesia (66F) - Performs professional nursing duties of a specialized nature in the care of patients requiring general or regional anesthesia, respiratory care, cardiopulmonary resuscitation, and/or fluid therapy. Nurses with this specialty administer general or regional anesthesia for surgical, diagnostic or therapeutic procedures; respiratory care, cardiopulmonary resuscitation, and/or fluid therapy. Nurses must have successfully completed an approved course in anesthesiology for nurses accredited by the American Association of Nurse Anesthetists (AANA) Council on Accreditation and be certified as a registered nurses anesthetist by the AANA Council on Certification. Certification for clinical proficiency must be continuous and authenticated every two years as specified by Council on Recertification.

Medical-Surgical Nursing (66H) - Provides professional nursing care and health promotion in military heath treatment organizations and in the broader military community. Responsibilities may span ambulatory, medical-surgical, emergency, and critical care nursing.

Critical Care Nursing (66H8A) - The critical care nurse cares for patients across the life span in the critical care unit. The critical care course is 16 weeks and prepares nurses to take care of critically ill patients in a variety of critical care settings. Course content includes the necessary knowledge and clinical skills, teaching techniques, and the principles of management of the critical care setting.

Emergency Nursing (66HM5) - This sixteen-week course prepares students to function as entry-level emergency nurses. The course focuses on responsibilities, nursing care, teaching role, principles and techniques of staff supervision and management of patients across the life span in an emergency setting.

Obstetrical and Gynecological Nursing (66G) - This sixteen-week course is designed to prepare AN officers to have the necessary knowledge and clinical skills to function as entry-level staff nurses in obstetrical, neonatal, and gynecological clients in the inpatient, outpatient and deployment settings. The course focuses on nursing roles and responsibilities in the provision of care to these patient populations in the TDA and TO&E settings.

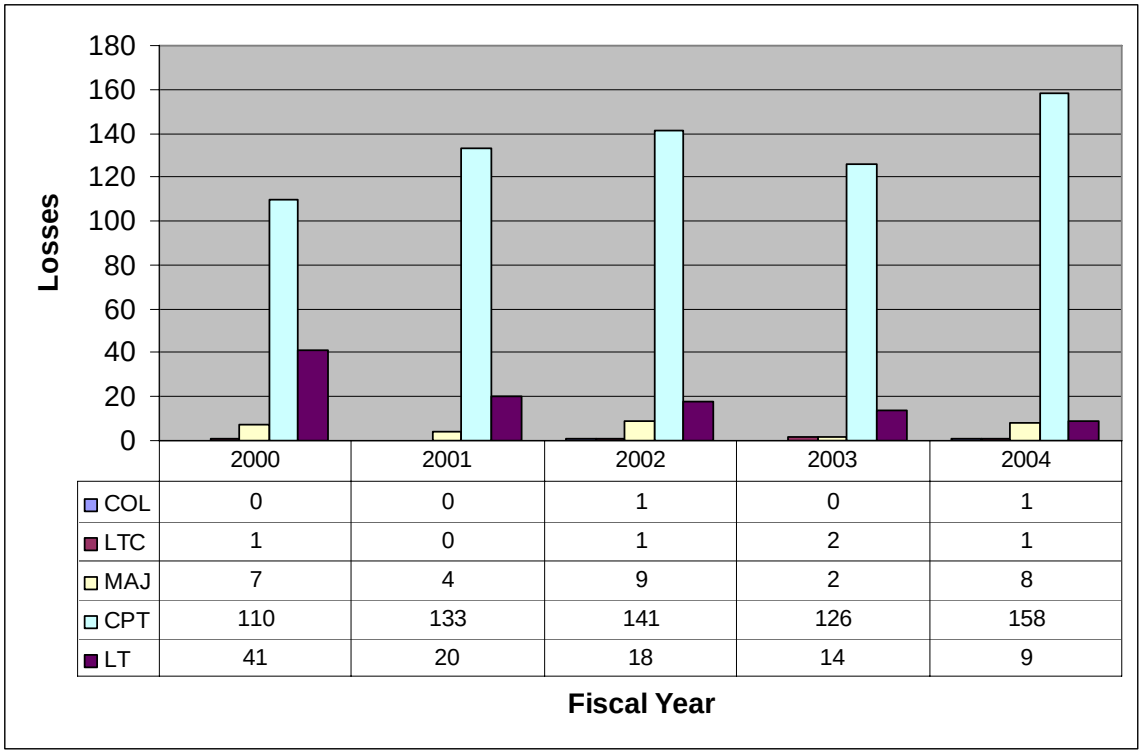
The Army provides and funds most of the training and education for Army nurses to obtain their specialties.

CHAPTER 3

LITERATURE REVIEW

This chapter focuses on some of the factors that contributed to the attrition of Army Nurse Corps junior officers as well as the national nursing shortage. The literature review will not be limited to studies conducted by the military. Because of the broad impact of the nursing shortage, this chapter includes a variety of studies conducted on the effects of the nursing shortage in the civilian and military health care systems. Also included are studies pertaining to military leadership, and the Global War on Terrorism (GWOT) as contributing factors to the military nursing shortage.

It is alarming to note the large number of junior officers that voluntarily resigned (REFRAD) from the Army Nurse Corps after completion of their obligation. The attrition rate among captains is significant because this rank often involves increasing professional responsibility for the officers' military and nursing career. Figure 2 illustrates the number of Army Nurse Corps officers who have left active duty during a five-year period:



	2000	2001	2002	2003	2004
COL	0	0	1	0	1
LTC	1	0	1	2	1
MAJ	7	4	9	2	8
CPT	110	133	141	126	158
LT	41	20	18	14	9

Figure 2. AN Resignation from Active Duty FY 2000-2004

Source: Office of the Surgeon General 2004.

Another statistic of concern is the number of junior officers who have been selected for voluntary indefinite (VI) status. Voluntary Indefinite status means the officer can elect to stay on active duty up to 20 years. If the officers decline VI status, he or she must leave active duty upon completion of the service obligation. Figure 3 and table 4 below illustrate the Army Nurse Corps officer VI trend from 2001 until 2004:

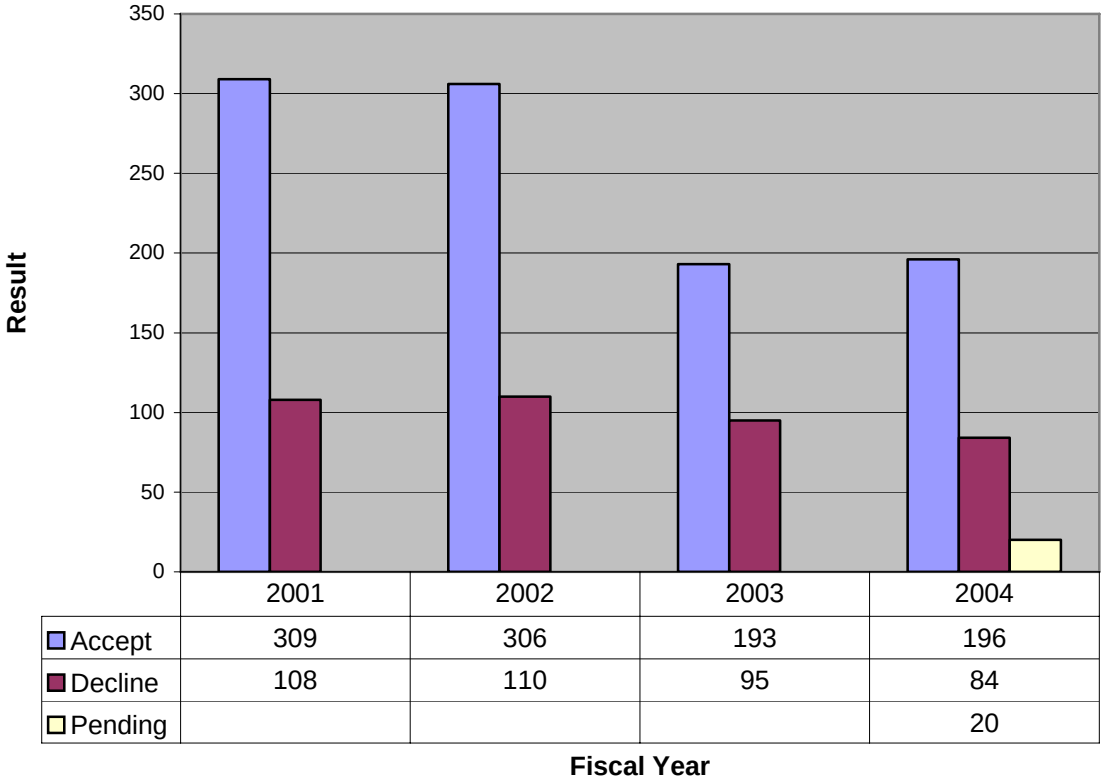


Figure 3. AN Voluntary Indefinite Trends

Source: Army Nurse Corps Branch 2004.

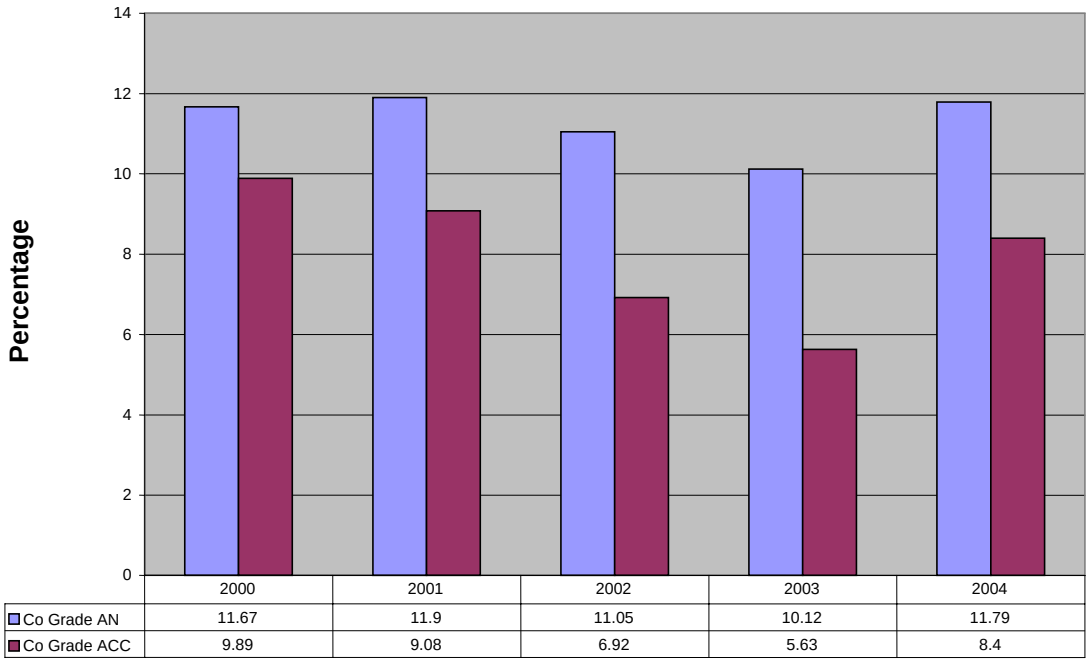
Table 4. AN Voluntary Indefinite Trends

	2001	2002	2003	2004	Total
Accept	309	306	193	196	1004
Decline	108	110	95	84	397
Pending	0	0	0	20	20
Total	417	416	288	300	1421
Accept %	74.1%	73.6%	67.0%	65.3%	70.7%
Decline %	25.9%	26.4%	33.0%	28.0%	27.9%

Source: Army Nurse Corps Branch 2004.

Based on the above data, the VI acceptance rates have been low (65.3% to 74.1%). Why a third of these officers chose to leave the military will be examined in this chapter.

The data in figure 4 compare the attrition rate between the Army Nurse Corps company grade officers (lieutenants and captains) and the Army Competitive Category (ACC) company grade officers. There is a higher attrition rate amongst military nurses compared to their ACC counterparts.



	2000	2001	2002	2003	2004
Co Grade AN	11.67	11.9	11.05	10.12	11.79
Co Grade ACC	9.89	9.08	6.92	5.63	8.4

Figure 4. Comparison between AN and ACC Company Grade Attrition Rates

Sources: Office of the Surgeon General 2004 and Human Resources Command 2005.

Causes of the Military Nursing Shortage

This section will now focus on some of the reasons for the shortage in the Army Nurse Corps. It is important to understand the reasons for these problems because it will help prevent the continued attrition of the Army nurses and also to help develop viable solutions to the nursing shortage problem.

Dissatisfaction in the Military Way of Life

The GAO conducted a study on the attrition and recruiting of the military services' enlisted personnel, *DOD Needs to Better Understand Reasons for Separation and Improve Recruiting Systems* (1998). This study determined why the attrition of enlisted personnel during their first terms of duty has remained relatively constant despite the increased quality of new recruits. According to GAO, despite increases in the quality of DOD's enlistees, about one-third of all new recruits continue to leave military service before they fulfill their first term of enlistment. This attrition rate is costly in that the services must maintain infrastructures to recruit and train around 200,000 persons per year. For example, in fiscal year 1996, the services' recruiting and training investment in enlistees who separated before they had completed six months totaled $390 million. In another GAO study, *First-Term Personnel Less Satisfied With Military Life Than Those in Mid-Career* (2001), satisfaction with military life and retention intent increase as personnel gain seniority in the military. The study concluded that first-term enlisted personnel were more dissatisfied (41 percent) than satisfied (35 percent) with the overall military way of life. In addition, only 29 percent of first-term enlisted personnel reported that they were likely to stay on active duty, and relatively few (14 percent) reported that they envisioned serving a twenty-year career. Mid-career personnel were more satisfied

than dissatisfied with the military way of life. More specifically, 52 percent of mid-career enlisted personnel and 62 percent of mid-career officers were satisfied, while only 23 percent and 20 percent, respectively, were dissatisfied.

GAO revealed that retention intent is related to the reasons that first-term and mid-career personnel joined the military. Among the top reasons that first-term enlisted personnel cited for joining were education benefits (43 percent) and training for civilian employment (18 percent). Those who cited these reasons indicated that they were less likely to stay on active duty than those who entered for other reasons, such as personal growth or travel and experiences.

On DOD's 1999 survey, active duty service personnel rated their satisfaction with 37 aspects of the military and identified which of the aspects were the most important reasons for leaving or considering leaving the military. The primary reasons service members cited for leaving the military were their basic pay, the amount of personal/family time, and the quality of leadership. While personnel who were dissatisfied with these three factors generally were less inclined to stay in the military than those that were satisfied, no single factor alone was a good predictor of retention intent. The best overall predictor of retention for first-term enlisted and mid-career personnel was overall satisfaction with the military way of life.

Military Deployment

Since 30 September 2001, 955,069 members of the armed forces had been deployed to different parts of the world to include Iraq and Afghanistan as the United States fights for the Global War on Terrorism (GWOT) (Bender 2004). The number of soldiers deploying especially for Operation Iraqi Freedom (OIF) and Operation Enduring

Freedom (OEF) in Afghanistan is steadily increasing. The Defense Manpower and Data Center released information stating that 31.8 percent or 303,987 military personnel had deployed more than once (Crawley 2005). The data also show that about half of all active-duty personnel have deployed at least once since the 11 September terrorist attacks. Army nurses are not exempted from these deployments. Figure 5 illustrates the number of Army nurses deployed in support of GWOT from FY 2001 to 2003. In FY 2001, 722 active-duty Army nurses deployed in support of OIF and OEF. In FY 2002, 1001 Army nurses deployed, and as of September 2003, 1459 Army nurses are deployed in support of GWOT (AN Branch 2004). This numbers represent 45 percent of the total number of active duty nurses in the Army. Given the upward trend in the number of Army nurses deployed in support of GWOT, it is expected that more nurses will deploy to Iraq and Afghanistan if the rate of OPTEMPO does not slow down.

- 2003: 1459 Army Nurses
  Total man-days=203,922
- 2002: 1001 Army Nurses
  Total man-days=25,133
- 2001: 722 Army Nurses
  Total man-days=14,581

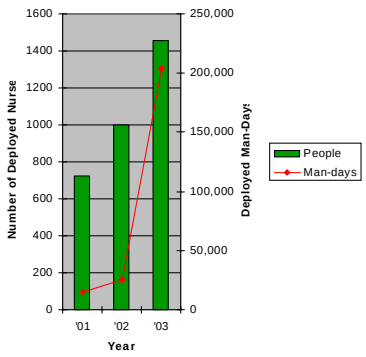


Figure 5. Army Nurse Corp Deployments (as of Sep 2003)

Source: Army Nurse Corps Branch 2004.

OIF and OEF deployments have already exceeded the size of the force that took part in the 1991 Persian Gulf War. A survey of National Guard and reserve members,

conducted in May 2004 showed a sharp decline in morale and willingness of these military personnel to stay in uniform (Crawley 2005). Another study, conducted by a panel of outside experts, concluded that the U.S. military does not have sufficient forces to sustain current and anticipated stability operations (Shanker 2004). Senator Jack Reed of Rhode Island found the study "provocative and startling." He said that "unless the United States scaled back its stabilization operations, it would have to reshape its forces to trade combat capabilities for stabilization capabilities or depend on contributions of troops from allied countries or the United Nations" (Shanker 2004).

The extents of deployment, particularly of multiple deployments, have placed enormous strains on soldiers and their families (Bender 2004). Harold Weiss, a psychology professor and co-director of the Military Family Research Institute indicated that "deployment is a big influence on people's commitments to military service, and both spouses and members are part of the decision-making process when a family decides to stay in the military." Weiss also added that "it's a family decision because the military is not a job; it is a life. Multiple deployments will make it harder to stay in the military" (Bender 2004).

In Andrea Stone's article "Study Cites Stress in Military" she highlighted that the "breathless pace of operations" combined with cuts in troop levels cause profound stress on military personnel (2000, 1A),. The members of the armed services feel overwhelmed and micromanaged and this combination could endanger the military's effectiveness in a war. When 12,000 service members were polled about unit morale, only 26 percent agreed or strongly agreed that the morale in their unit was high. Many service members

cited low pay, stress, and unexpected deployments as contributing to a poor quality of life.

Generational Differences in Leadership

The Army is a complex organization. Its coordination and control is primarily achieved vertically, which means that higher level coordinate and control the work of subordinates and lower levels through devices like authority, rules and policies, and planning and control systems. This type of structure causes a rift between the officers of the new generation and its senior leadership. There is a very different view of the world for officers born between 1945 and 1960 compared with those officers born between 1960 and 1980. Junior officers believe that senior officers do not understand their perspectives and that the senior leadership is not connected to the reality of the trenches (Wong 2000a). Wong added that generals and colonels incorrectly assume that today's captains and lieutenants share their values and life experiences.

According to Wong, today's junior officers tend to be extremely skeptical of authority and less inclined to sacrifice time with families to succeed at work. He also noted that only 21 percent of captains surveyed by the Army in 1998 said that the Army permitted them to maintain a good balance between work and personal life, compared with 47 percent of captains in 1988 (Wong 2000a). Today's junior officers are also less impressed with authority. These officers have been let down by too many authority figures, ranging from overworked parents to their commander in chief. The gap between generations is widened by the skepticism of younger officers, who are holding their superiors to far higher standards than in the past (Wong 2000a). In another survey conducted in 1998, 18 percent of captains said they were dissatisfied with their senior

officers, compared with 6 percent in 1988 (Ricks 2000b). An interview conducted with several lieutenants indicated that the largest problem affecting the junior officer retention is the perception that the senior leadership is completely out of touch with soldiers and their needs (Ricks 2000b).

Lieutenant Colonel Albert Johnson Jr. conducted research on officer attrition. His results indicate that lack of communication between junior officers and their immediate supervisors is driving good, young captains out of the Army. His research identified six major points (Tice 2001):

1. Captains are leaving service because they are frustrated with their senior leaders, primarily majors and lieutenant colonels.

2. Families must be considered in decisions affecting junior officers.

3. Majors and lieutenant colonels are key to the development of junior officers, but only 50 percent of the 96 company-grade officers surveyed have a field-grade officer as a mentor.

4. The expectations of junior officers can be met within the framework of a battalion-size organization.

5. The new Officer Evaluation Report is not a contributor to captain attrition.

6. A lack of communication breeds a lack of trust.

A report published by the Army Times (Naylor 2001a) described the Army environment as “heavily micromanaged, soldiers and units are run ragged, and trust between commanders and troops they lead has disappeared.” The report emphasized the rampant problem of micromanagement that has developed in the Army over the recent years. Junior officers complain about the top-down training directives and strategies

combined with brief leader-development experiences that lead to their perception that micromanagement is indeed a big problem. Many junior officers also think that the problem of micromanagement arises from the "zero-defect" culture that developed in the recent years. This zero-defect culture means one misstep, particularly while in command can derail an officer's career (Naylor 2001a). The "zero-tolerance" for mistakes and errors that the officers feel they cannot leave anything to chance. The Army lost many good officers because of this 'zero-tolerance' mentality. One officer commented that because of this, they "stop being officers and start becoming robots" (Naylor 2001a).

> A captain commented that lieutenants and captains have no control over what happens in their units. "Our training is dictated to us from the higher. More painful than the knowledge that our soldiers are grossly under trained is the knowledge that we are powerless to do anything about it. . . . [W]e are continually torn apart by trying to accomplish the missions given to us in a bureaucracy that blocks us at every step and fails to give us the basic resources to accomplish those missions. We aren't trying to be Patton, sir. We are trying to be platoon leaders and commanders, but the system won't allow it." (Company Grade Discussion Forum, U.S. Army Human Resources Command 2001)

The Command and General Staff College at Fort Leavenworth conducted a survey of 760 mid-career students and many respondents stated that "the Army's senior leadership has a definite credibility problem" (Defense and the National Interest 2000). When these officers were questioned how much the senior leaders really care, or if they are just "riding the status quo as opposed to standing up and sounding off," the students commented: "to hear a general officer make the statement that something is 'above my pay grade' generates massive cynicism" (Defense and the National Interest 2000). According to the survey respondents, when they were lieutenants, they all supported their soldiers. Most of the problems they faced were above their pay grades, but they stood up for what they believed in. The respondents questioned why it was so hard for general

officers to do the same thing (Defense and the National Interest 2000). The survey also examined the reasons for captain attrition, and the results were:

1. Lack of empowerment for captains/company commanders. Higher commands took many decisions out of company commanders' hands. Closely connected to perceived inability to take risks and fail (zero defect mentality).

2. Company command experience is key impression for opting for military career. If it is negative, fewer company commanders will elect to stay.

3. Captains are less likely now to believe "it will get better," particularly since their close mentors (O-4s/O-5s) will tend to be negative too.

There is clearly a wide generational gap between the old and new group of Army officers. Senior leaders grew up in a different military environment compared to the present military setting. Many junior officers are questioning where the military profession is going, and what the senior leaders' priorities are. From their standpoint, the Army is turning into more of a bureaucracy than a professional organization. They also contend that the professionalism is sacrificed for the sake of gaining financial resources (Defense and the National Interest 2000).

In Dr. Wong's article "Stifled Innovations? Developing Tomorrow's Leaders Today" (2000b), he examined the current company commander experience and concluded that the Army values innovation in its rhetoric, but in reality, junior officers are seldom given opportunities to be innovative in planning training; to make decisions; or to fail, learn, and try again. According to Wong, there are three main factors that tend to occur when junior officers are placed in leadership positions. First, higher echelons increasingly are directing training requirements, taking away the discretion of company

commanders to plan their own training. Second, higher headquarters increasingly are dictating how training should be conducted, taking away the initiative of company commanders when executing training. Finally, senior commanders increasingly are disrupting training with administrative requirements and tasking, taking away the predictability of company command. Wong concluded that if the transformed Army will require leaders who can operate independently in the absence of close supervision, the current leader development experience of company command would have to change. He asked senior leaders not to do more, but do less and give their subordinates more freedom to innovate. Army Nurse Corps junior officers sometimes complain about the same issues. It is therefore important for the nursing profession and the Army Nurse Corps leadership to remain synchronized with the shift in generational values in order to decrease the problem with the attrition of the Army Nurse Corps officers.

Recruitment and Retention Issues

Recruitment of nurses and nursing students has been a challenge for the Army Nurse Corps. The U.S. Army Reserve Officer Training Command (ROTC) is experiencing a greater than 73 percent decline in nurse scholarship cadets from 178 in 1999 to just 131 for 2004 (see figure 6). In FY 2006, the nurse mission will increase to 225 (Bryant 2004). Similar to the ROTC, the U.S. Army Recruiting Command (USAREC) is also experiencing a shortfall in its recruiting effort for nurses (see figure 7). New graduates with 1 to 5 years experienced are becoming more difficult to attract to the military. As a result, the Army Nurse Corps is faced with an older, limited-term, and non-career track force. This exacerbates the eroding junior officers' ranks that supply the majority of clinical specialty base (Bester and Gustke 2001). In an interview with Colonel

Ann Richardson, Chief Nurse, U.S. Army Recruiting Command, she stated that "the Army's recruitment of nurses would continue to experience a shortfall because of the national nursing shortage." She also added "based on our marketing research, the national nursing shortage seems to be our number one obstacle." Richardson mentioned that they would continue to bring older nurses to the military because "MG Pollock, current Chief of the Army Nurse Corps, feels that older nurses can make a significant contribution. They not only have experience--they can also be mentors for junior nurses" (Richardson 2005).

Because of the ROTC and USAREC recruitment shortfalls, coupled with 30 to 35 percent attrition rates of first term officers, the Army Nurse Corps is 203 short of its authorized strength of 3,415 officers. If this trend continues without relief, the AMEDD patient care mission will be severely hampered. The problems with the nursing shortage in the military and junior officer attrition create a domino effect in the Army. If the U.S. Army soldiers are not getting adequate medical care in the military, the U.S. military and the country will suffer. Immediate attention should be given to the rising junior officer attrition rate before the shortage becomes critical.

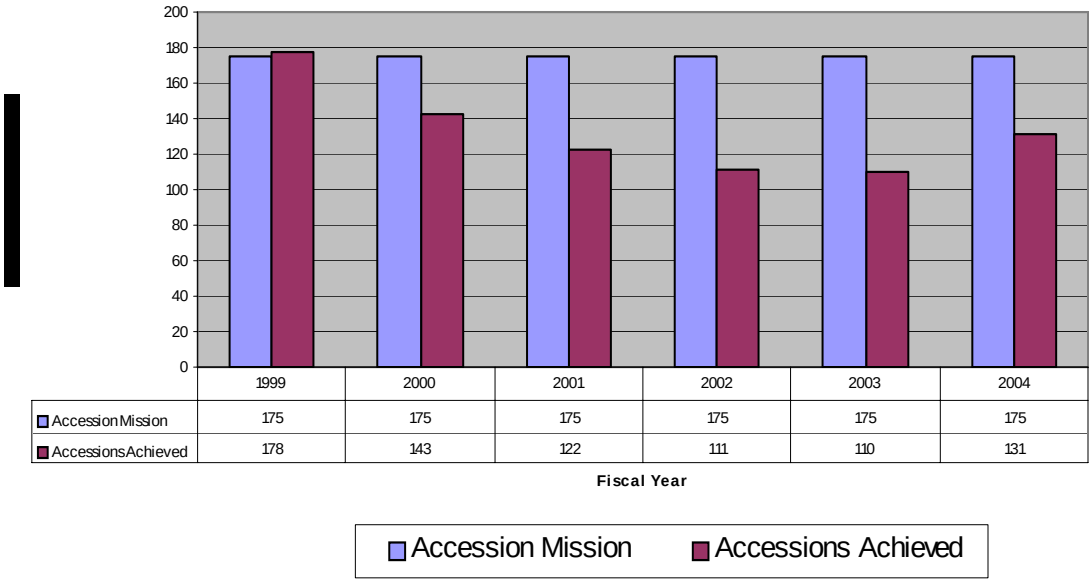


Figure 6. ROTC Active Duty Nurse Recruitment

Source: ROTC Cadet Command 2004.

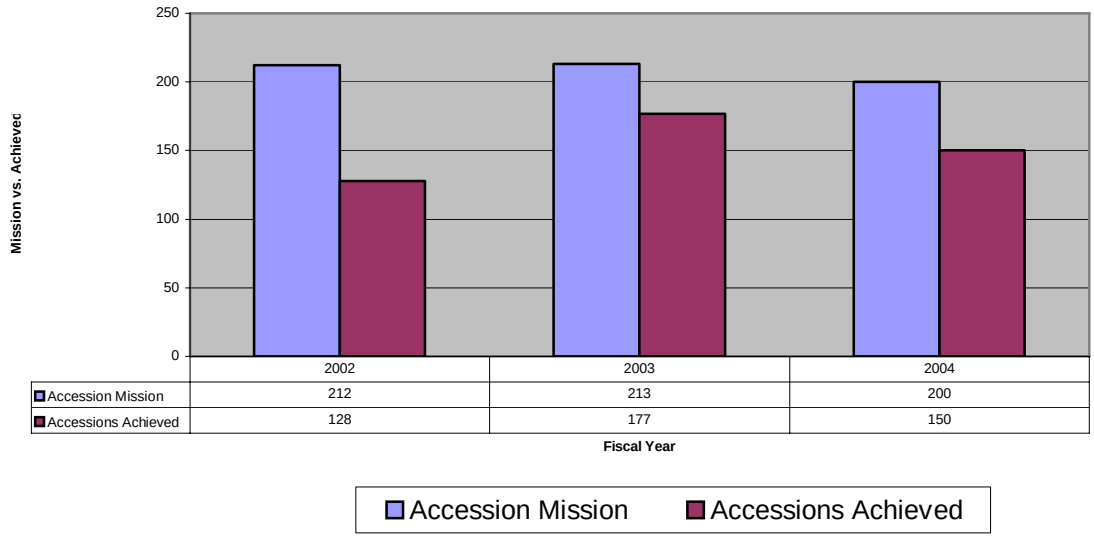


Figure 7. USAREC Active Duty Nurse Recruitment Data

Source: US Army Recruiting Command 2004.

Greg Jaffe wrote in his article "The Military Wages Uphill Battle to Find the Willing and Able" (23 September 1999) that the reasons are numerous why the Army and the Air Force cannot find enough people to fill the ranks. According to Jaffe, the DOD was seven percent behind in its recruitment goals in fiscal year 2000, a shortfall of more than 9,000 troops. Additionally, the DOD now spends nearly $2 billion a year recruiting more than 200,000 soldiers, sailors, and airmen. He stated that the economy was surging and jobs were plentiful. States have spent billions building vast community college systems, giving millions more high school graduates access to post-secondary education. Many peacekeeping missions are conducted in unattractive locations and their durations are uncertain, making it harder to recruit people. Additionally, many of today's parents never served in the military and/or had little or no emotional connection to the military; therefore their tendency is to discourage their children from joining the armed forces.

The Civilian Nursing Shortage

Nursing is the largest health care profession in the United States. Currently, there are more than 2.7 million registered nurses (RNs) nationwide (American Association of Colleges of Nursing 2004). In a report published by the U.S. Bureau of Labor Statistics in October 2004, nursing is the occupation with the largest predicted job growth from 2002 to 2012. In 2002, RNs held about 2.3 million jobs in 2002. About three out of five nursing jobs were in hospitals. About one out of five RNs worked part time. According to the U.S. Bureau of Labor Statistics, the average nursing salary in 2004 was $54,574, which is 10 percent higher than 2003 (Brenner 2005). The lowest paid 10 percent earned less than $33,970 and the highest-paid 10 percent made more than $69,670. Also, nurse managers earned $100,000 in 2004. Brenner stated that the scarcity of qualified

applicants, such as nurses, is boosting wages (Brenner 2005). Many employers offer flexible work schedules, childcare, education benefits, and bonuses. With the medical advances in patient care, demand for nurses will continue to increase. Additionally, more nurses will be needed because of the rapid increase in the number of older people requiring more health care. Good job opportunities are expected for RNs (U.S. Bureau of Labor Statistics 2004).

Despite the abundance of job opportunities expected for RNs, the United States is experiencing a shortage in nursing. Buchan and Calman define nursing shortage "as an imbalance that exists between the requirements for nursing skills (usually defined as a number of nurses) and the actual availability of nurses. Availability has to be qualified by noting that not all 'available' nurses actually will be willing to work at a specific wage or package of work-related benefits. Some nurses may choose alternative non-nursing employment or no employment" (Buchan and Calman 2004). According to National League for Nursing (NLN), nursing shortage is "therefore not merely about a numbers game or an economic model, it is about individual and collective decision-making and choice" (2004). NLN also added that the shortage is not necessarily a shortage of individuals with nursing qualifications; it is a shortage of nurses willing to work as nurses in the present conditions. Fewer nurses are entering the workforce leading to acute shortages in certain geographic areas. Additionally, the nursing shortage cannot meet certain areas of patient need in a changing health care environment (National League for Nursing 2004). As a result, many hospitals are closing down or limiting their services, diverting patients, and canceling surgeries because of the inadequate number of professional nursing personnel (National League for Nursing 2004). The American

Association of Colleges of Nursing (AACN) anticipated that the nursing shortage will get worse as the baby boomers transition into retirement and add to the increasing population of senior citizens requiring health care services and the growing need for management of chronic diseases (American Association of Colleges of Nursing 2004).

In July 2002, the Health Resources and Service Administration, Bureau of Health Professions, National Center of Health Workforce Analysis conducted a study relating to the supply and demand projections for registered nurses for the year 2000 through 2020. According to their study, the national supply of full-time RNs in 2000 was estimated at 1.89 million while the demand was estimated at 2 million, resulting in a shortage of 110,000 nurses. Based on what is known about trends in the supply of RNs and their anticipated demand, the 6 percent shortage of nurses in year 2000 is expected to reach 12 percent by year 2010. Demand for nurses will continue to exceed supply and by 2015 the shortage will have almost quadrupled to 20 percent. If the issue of nursing shortage is not addressed, and if current trends continue, the shortage is projected to grow to 29 percent by 2020 (US Department of Health and Human Services 2002).

The study projected that the shortage in 2020 would result from a projected 40 percent increase in demand between 2000 and 2020 compared to a projected 6 percent growth in supply. The study concluded that "the demand will grow steadily at a rate of 1.7 percent annually" (US Department of Health and Human Services 2002). The study also stated that the factors driving the growth in demand include an 18 percent increase in population, a larger proportion of elderly persons, and medical advances that heighten the need for nurses (US Department of Health and Human Services 2002).

Dr. Peter Buerhaus wrote in the *Journal of American Medical Association* that by the year 2020, "The U.S. will experience a 20% shortage in the number of nurses needed in our nation's healthcare system. This translates into a shortage of more than 400,000 RNs nationwide" (American Association of Colleges of Nursing 2004). The U.S. Bureau of Labor Statistics also reported that more than one million new and replacement nurses will be needed by 2012 (American Association of Colleges of Nursing 2004). Adding to this problem, enrollment in nursing education or training programs has decreased consistently over the past five years, and more registered nurses are leaving the profession to do something else.

The Aging Nursing Workforce

The large numbers of RNs that entered the labor force in the 1970s are now over the age of 40 and are not being replenished by younger RNs. Between 1983 and 1998, the number of RNs in the workforce and aged under thirty fell by 41 percent, compared to only a 1 percent decline in the number under age thirty in the rest of the U.S. workforce (Buerhaus et al. 2000a). Buerhaus and his colleagues also reported that "in 1980, over half of all RNs were reported to be under age 40, fewer than one in three were younger than 40 in 2000. The percent of nurses under age 30 decreased from 26 percent in 1980 to 9 percent in 2000, while the percent of nurses between age 40 to 49 grew from 20 to 35 percent" (2000a).

Consequently, older nurses far outnumber the younger nurses. In a typical hospital ward, there are very few 20-something year-old nurses. Many of the nurses entering the field graduated from nursing schools in their thirties or forties. The current national average age of nurses is now 45 years old, and only about 10 percent of nurses

are under 30 (Gillies 2004). Not only is the total number of new nurses declining, but their average age has increased to over 30 years. This means that half of today's nurses will be at retirement age within the next 15 years, and if the trend continues, fewer nurses will take their place (Gillies 2004).

Fewer young people are choosing nursing as a career for several reasons. Over the last 2 decades, as non-nursing career opportunities for women have expanded, the number of young women entering the nursing workforce has declined (Buerhaus et al. 2000a). The major roadblock is that nursing is viewed as traditionally a "women's work." As women have more career choices today, they increasingly choose fields that pay better salaries and at the same time provide a more exciting reputation (Gillies 2004).

Decline in Nursing School Enrollment

The decrease in nursing school enrollment contributes significantly to the nursing shortage. As more opportunities are created for women, the nursing profession has become less attractive to women. Additionally, the nursing profession has failed to draw men in large numbers (Kimball et al. 2002). A study conducted by Dr. Buerhaus and his colleagues reported that women graduating from high school in the 1990s were 35 percent less likely to become RNs than women who graduated in the 1970s (Buerhaus et al. 2000b). The Nursing Executive Center Report published in 1999 stated that between 1993 and 1996, enrollment in diploma programs dropped 42 percent and enrollment in associate degree programs declined 11 percent; between 1995 and 1998, enrollment in baccalaureate programs declined 19 percent, and enrollment in master's programs decreased 4 percent (GAO-01-944 2001).

Another reason for the shortage of nursing school enrollment is the shortage of nursing faculties. According to AACN, in 2003 U.S. nursing schools turned away almost 16,000 qualified applicants from entry-level baccalaureate nursing programs because of faculty shortages. Some 614 teaching vacancies have been reported at 300 nursing schools across the country. The average salary for a nurse professor with a master's degree was $60,357 in 2003. A nurse practitioner with the equivalent education earned $80,697, or 34 percent more, working at an emergency department (Moon 2004). With the median age for full-time nurse faculty at 52 in 2003 and the average age of retirement at 62, nursing schools could see a surge in retirements during the next decade. AACN stated that many nursing instructors are retiring or are going back to practice in the field where they can earn more money, leading to widespread shortage of nursing professors (Moon 2004).

Job Dissatisfaction

Job satisfaction is a term used to describe how content an individual is with their job. It is a relatively recent term since in previous centuries the jobs available to a particular person were often predetermined by their parent's occupation. A variety of factors can influence a person's level of job satisfaction; these include level of pay and benefits, perceived fairness of the promotion system within a company, quality of the working conditions, leadership and social relationships, and the job itself (the variety of tasks involved, the interest and challenge the job generates, and the clarity of the job description/requirements) (Retrieved from http://en.wikipedia.org/wiki/Job_satisfation).

In a survey conducted by the Department of Health and Human Services, 69.5 percent of registered nurses reported being "moderately satisfied" with their jobs. In

comparison, workers in other industries and professional workers are 85 percent and 90 percent satisfied with their jobs, respectively. In a similar survey conducted in 1999 by the Nursing Executive Center, 28 percent of registered nurses said that they were either "somewhat" or "very dissatisfied" with their jobs; 51 percent were "somewhat satisfied" and only 21 percent were "very satisfied" (American Federation of State, County, and Municipal Employees, AFL-CIO 2004).

This study also concluded that nurses' dissatisfaction with their jobs is universal. It stated that personal factors such as age, years of experience, or education have relatively little impact on job satisfaction. The Nursing Executive Center reports "that high levels of dissatisfaction are consistent across all pay levels: 29.5 percent of RNs making less than $15 per hour are dissatisfied, but so are 30.1 percent of those making $21–$23 per hour and 24.6 percent of those making $23–25 per hour, the top ranking" (American Federation of State, County, and Municipal Employees, AFL-CIO 2004).

The study also reported that dissatisfaction varies among different units of the hospital. 29.2 percent of ICU nurses and 31.9 percent of medical/surgical nurses are dissatisfied with their jobs. In looking at different age groups among nurses, every age group also exhibits high levels of dissatisfaction with their jobs. On the average, 27.8 percent of the registered nurses are dissatisfied with their jobs (American Federation of State, County, and Municipal Employees, AFL-CIO 2004).

According to Nursing Executive Center, many studies concluded that retention and turnover rates are directly correlated with job satisfaction. Between 1998 and 2000, 19 percent of registered nurses transferred to another hospital. Additionally, another 64 percent of registered nurses considered leaving the hospital in two years. Furthermore,

more than 40 percent of registered nurses expected to stay at their current job in less than 3 years. The American Organization of Nurse Executives (AONE) reports that there are multiple factors contributing to the nurses' job satisfaction. One study asked nurses to describe how they felt at the end of a day's work. Nearly 50 percent reported that they typically felt "exhausted and discouraged"; 40 percent felt "powerless to affect change necessary for safe, quality patient care"; 26 percent felt "frightened for [their] patients"; and 24 percent felt frightened for themselves (American Federation of State, County, and Municipal Employees, AFL-CIO 2004).

The AONE reported in a survey that nurses would continue working as nurses if the job conditions improved. They added that many registered nurses would consider staying, and many others who have left nursing would consider returning, if certain conditions were met. Among the conditions the nurses have asked for are better compensation, an improved work environment, better hours and more respect from management. Similarly, nurses with no plans to leave shared many of these same sentiments (American Federation of State, County, and Municipal Employees, AFL-CIO 2004).

Pay Inequity

A report on income disparity between genders indicated that pay gap still exists between men and women, with men earning more than women (Nyhan 2004). Based on 2000 Census results that tracked 1999 income data for 505 job categories, the Census Bureau found just five jobs where women typically earn at least as much as men. Among registered nurses, 91 percent of which were women, their median income was $42,000. Male nurses made $45,000, according to the Census Bureau's study (Nyhan 2004). It was

argued that the nursing pay gap may not be related to discrimination. According to Judy Shorr, manager of nursing recruitment at the University of Washington Medical Center, “male nurses made more money perhaps because of the fact they gravitate to higher paying nursing jobs, such as nurse anesthetist.” Shorr also added that “nurses don't command more because of their gender because pay is based on years of experience” (Nyhan 2004).

Though some nurses have expressed dissatisfaction with their wages, money is not always cited as the primary reason for job dissatisfaction. In a study conducted by the Federation of Nurses and Health Professionals (FNHP), of those RNs responding who had considered leaving the patient-care field for reasons other than retirement over the past 2 years, only 18 percent wanted more money. Over 56 percent who were concerned about the physical demands and stress of the nursing job. However, the same study reported that 27 percent of current RNs responded that higher salary and better health care benefits are incentives to improve their jobs (GAO-01-944 2001).

In a GAO analysis of median weekly earning for RNs employed full-time, RN earnings growth lagged behind the rate of inflation from 1994 through 1997. However, in 1998 and 2000, RN earnings growth exceeded the rate of inflation, which showed that the RN earnings just kept pace with the rate of inflation. GAO study concluded that wages can have a long-term impact on the size of a workforce pool as well as a short-term effect on people’s willingness to work (GAO-01-944 2001).

Salary expectations for civilian nursing jobs are quite good, with many employers offering signing bonuses or well paid per diem work. The U.S. Department of Labor has published the median income for RNs as $54,574 in 2004, up 10 percent from 2003. The

range was $33,970 to $69,670 based on geographic location and work experience. Additionally, nursing employers offer other benefits including a flexible schedule, a short work week (three 12-hour shifts with four days off), tuition reimbursement and sign on bonuses (Stein 2004).

The military is experiencing difficulty competing against the civilian job market, especially in nursing because of the many alternatives the civilian sector offer to young people. A study conducted by Rand-Arroyo Center concluded that military pay will not rise as rapidly as civilian pay. Though military compensation for officers will increase in the next few years, it is still in the 70th percentile of the civilian wage distribution (Hosek and Sharp 2001).

A wide range of studies has been done to compare military and civilian compensation, but it is oftentimes difficult to find a common index or indicator to compare military and civilian pay. Military compensation is complicated and composed of many different elements compared to civilian pay (Goldich 2004). Military cash pay includes numerous components, such as special pay and bonuses paid to select groups such as medical doctors and dentists. Another aspect of the pay, the housing allowance and subsistence allowance, is not taxable and contribute significantly to the service members' annual income. Total military compensation benefits also include a wide range of non-monetary benefits such as the extensive military health care network, commissaries and exchange privileges, use of military recreational facilities at discounted prices or free-of-charge (Goldich 2004).

Tables 5 and 6 show the annual basic salary of company grade officers and the housing and subsistence allowance.

Table 5. Military Basic Pay Table				
	Less than 2 years	2 years	3 years	4 years
2LT / O-2	28,123.20	29,268.00	35,377.20	35,377.20
1LT / O-3	32,392.80	36,896.40	42,494.40	43,930.80
CPT / O-3	37,494.00	42,505.20	45,878.40	50,020.80

Source: Defense Finance and Accounting Services 2005.

Table 6. Military Basic Allowance for Housing and Subsistence			
Basic Allowance for Housing (Annual)			Basic Allowance for Subsistence (Annual)
	Without Dependents	With Dependents	
2LT / O-2	5,770.80	10,249.20	2,207.88
1LT / O-3	6,847.20	8,748.00	2,207.88
CPT / O-3	8,636.40	7,830.00	2,207.88

Source: Defense Finance and Accounting Services 2005.

Impact of the Nursing Shortage on Patient Care and Safety

Registered Nurses "are the main professional component of the 'front line' staff in most health systems, and their contribution is recognized as essential to meeting these development goals and delivering safe and effective care" (Buchan and Calman 2004). Inadequate professional nursing staff in the patient care environment has negative impact on the delivery of safe and effective care. Nursing shortages and understaffing have been linked to a range of negative outcomes which include: increased mortality rates; adverse events after surgery; increased incidence of violence against staff; increased accident rates and patient injuries; and increased cross infection rates (Buchan and Calman 2004).

Other studies also point to the connection between adequate levels of registered nurse staffing and safe patient care.

According to a study conducted by nurse researchers at the University of Pennsylvania, patients who have common surgeries in hospitals with the worst nurse staffing levels (highest nurse-to-patient ratio) have an up to 31 percent increased chance of dying (Aiken et al. 2002). The research found that every additional patient in an average hospital nurse's workload increased the risk of death in surgical patients by 7 percent. Additionally, the study concluded that patients with life threatening complications are also less likely to be rescued in hospitals where nurses' patient loads are heavier. Having too few nurses may actually cost more money given the high costs of replacing burnt-out nurses and caring for patients with poor outcomes (Aiken et al. 2002).

A separate study conducted by Dr. Linda Aiken and her colleagues at the University of Pennsylvania concluded that a shortage of nurses prepared at the baccalaureate level may affect health care quality and patient outcomes. This extensive study identified a clear link between higher levels of nursing education and better patient outcomes. The study found that surgical patients have a "substantial survival advantage" if treated in hospitals with higher proportions of nurses educated at the baccalaureate or higher degree level. In hospitals, a 10 percent increase in the proportion of nurses holding BSN degrees was associated with a 5 percent decrease both in the likelihood of patients dying within 30 days of admission and in the odds of "failure to rescue", which was defined as death from pneumonia, shock or cardiac arrest, upper gastrointestinal bleeding, sepsis, or deep venous thrombosis (Aiken et al. 2003).

A study on medical errors published by the *New England Journal of Medicine* on 12 December 2002 found that 53 percent of physicians and 65 percent of the public cited the nursing shortage as a leading cause of medical errors. Overall, 42 percent of the public and more than a third of U.S. doctors reported that they or their family members have experienced medical errors in the course of receiving medical care (Blendon et al. 2002). The Harvard School of Public Health and the Henry J. Kaiser Family Foundation conducted the survey.

A study conducted by Dr. Jack Needleman and his colleagues on the comparison of number of hours of nursing care per patient day concluded that a higher proportion of nursing care provided by RNs and a greater number of hours of care by RNs per day are associated with better outcomes for hospitalized patients (Needleman et al. 2002). Among medical patients, a higher proportion of hours of care per day provided by registered nurses and a greater absolute number of hours of care per day provided by registered nurses were associated with a shorter length of stay, and lower rates of urinary tract infections and upper gastrointestinal bleeding. A higher proportion of hours of care provided by registered nurses were also associated with lower rates of pneumonia, shock or cardiac arrest, and failure to rescue. Among surgical patients, a higher proportion of care provided by registered nurses was associated with lower rates of urinary tract infections. Additionally, a greater number of hours of care per day provided by registered nurses were associated with lower rates of failure to rescue. The Needleman study concluded that there was no link between increased levels of staffing by registered nurses and the rate of in-hospital death or between increased staffing by licensed practical nurses or nurses' aides and the rate of adverse outcomes (Needleman et al. 2002).

In *Health Care at the Crossroads: Strategies for Addressing the Evolving Nursing Crisis*, a report released in August 2002 by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), the authors found that a shortage of nurses in America's hospitals is putting patient lives in danger. JCAHO examined 1609 hospital reports of patient deaths and injuries since 1996 and found that 24 percent of the cases were related to low nursing staff levels. In addition to patient safety and health care quality, the nursing shortage is reducing hospital's capacity to treat patients. In a recent study conducted for the American Hospital Association, respondents reported that the nursing shortage has caused emergency department overcrowding in their hospitals; diversion of emergency patients; reduced number of staffed beds; discontinuation of programs and services; and cancellation of elective surgeries. Furthermore, nearly 60 percent of respondents reported that nurses feel it is more difficult to provide quality care today because of the nursing shortage (Joint Commission on Accreditation of Healthcare Organizations 2002). Nursing shortage is not just an organizational challenge or a topic for economic analysis; it has a negative impact on healthcare. Failure to deal with a nursing shortage is likely to lead to failure to maintain or improve health care (Buchan and Calman 2004).

CHAPTER 4

RESEARCH METHODOLOGY

The research conducted in this thesis does not fit the traditional, single-purpose methodology. A combination of methods that include descriptive, historical, interview, and statistical/survey interview are applied in this research paper.

Interviews were conducted with the Chief Nurse, U.S. Army Recruiting Command, Chief Nurse ROTC Cadet Command, and Personnel Management Officers, Army Nurse Corps Branch. E-mail interview were also conducted with Office of the Surgeon General and Office of Personnel Distribution Division, U.S. Army Human Resources Command.

Statistical methodology is also used in this research paper. The primary source of data is the AN Exit Survey (see Appendix A). Survey results used were distributed, collected, and compiled by the Army Nurse Corps Research Department. Analysis of the survey results is conducted by using a nonparametric method called the Friedman's test. Friedman's test is used to test the null hypothesis that several treatment effects are equal for data in a two-way layout. This is also "appropriate when we are dealing with *J* different samples, or experimental treatments, and we have *K* sets of observations that are matched" (Winkler and Hays 1975, 864). *K* individuals might be observed under each of *J* treatments. In this survey, *K* individuals represent the individual respondents and *J* treatments represent the reasons for leaving (RL). The test statistic for the Friedman's test is a chi-square with a-1 degrees of freedom, "where a is the number of repeated measures. When the p-value for this test is small (usually <0.05) there is enough evidence

to reject the null hypothesis" (retrieved from http://www.texasoft.com/winkfrie.html).

CHAPTER 5

ARMY NURSE CORPS EXIT SURVEY AND ANALYSIS

The Army Nurse Corps Exit Survey was crafted by the Army Nurse Corps Research Department and these questionnaires were distributed to Army Nurse Corps officers who voluntarily resigned from active duty. The purpose of the survey was to identify and examine their reasons for leaving the Army Nurse Corps. Additionally, further questions were asked to determine what they intended to do once they left the Army. Exit questionnaires were distributed to these officers through their chain of command and their responses were used to answer some of the questions stated in this research paper. Questionnaires were distributed and collected during FY 2002 to FY 2004.

The importance of this study to Army Nurse Corps officers prompted the decision that each member be given the opportunity to participate. To facilitate the process, Chief Nurses at all Army medical treatment facilities were contacted and requested to appoint a project officer to distribute and monitor the return of questionnaires.

The information gained from these sources served as a basis for survey construction. The final instrument contained 57 possible reasons for leaving (RL) active duty and they are divided into six categories: Family Issues, Pay and Benefits, Work Environment, Career and Promotion, Quality of Life, and OPTEMPO. In addition, two questions were included asking respondents to select which of the 57 items made them *first think about leaving active duty* and *the most important reason for leaving active duty*. The last part of the questionnaire contained 10 questions asking the participants

about their plans after the military. These remaining items required a short response or selection of a multiple-choice option.

Study Population

Army Nurse Corps officers who voluntarily resigned from active duty comprised the target population for this survey. The survey was conducted between 2002 and 2004. Of the 491 Army Nurse Corps officers who voluntarily resigned from the military, 161 completed the exit survey (32.8 percent). The Army Nurse Corps Research Department developed and compiled the data of this survey.

Instrument

The survey consisted of 80 questions in three parts. Part 1 (Questions 1-11) collected demographic data; and Question 12 dealt with the original career intentions; Part 2 (59 questions) involved questions pertaining to respondents' Reasons for Leaving; and Part 3 (10 questions) asked about the respondents' future plans. The survey included forced-choice questions and multiple-type questions. 57 forced-choice questions (Part 2, Questions 1-57) used the Likert scale: 0 (Not important at all), 1 (Moderately Unimportant), 2 (Neither Important nor Unimportant, 3 (Moderately Important), and 4 (Extremely important). Part 2 Questions 58 and 59 required the participants to select one of the 57 items that made them *First Think* about leaving active duty, and the *Most Important* reason for leaving active duty.

For analysis of the Likert scale questions, the percentages of participants' responses are computed in each category. A favorable response is defined as a response of *moderately important* and *extremely important*. The benchmark used for analysis was 50 percent favorable responses. The margin of error for the aggregate sample percentages

was ±1% (α=.05). There is 95 percent confidence that the standard for the question is met if the favorable response percentage obtained from the sample is above 50% + 1% = 51%. Likewise, there is a 95 percent confidence that the standard for the question is not met if the favorable response percentage obtained from the sample is below 50% - 1% = 49%. Between these values, we cannot make definitive statement. The breakdowns of the results of the Likert scale questions are located in Appendix B.

Data Collection Results and Analysis

1. Demographic Characteristics of AN officers. The characteristics of the survey respondent are described according to the demographic indicators listed.

a. *Gender*. The distribution of responses as 77.6% Female, 21.1% Male.

b. *Marital Status.* The distribution of responses was 72% Married, 26.7% Not Married.

c. *Age*. The distribution of responses was 52.1% between age 25-29, 22.3% 30-34, 9.9% 35-39, 7.5% 40-44, 6.8% 45 and older.

d. *Deployment in support of the GWOT.* The distribution of responses was 49.7% Did Not Deploy, 21.9% Deployed 1-30 days, 6.8% Deployed 31-60 days, 4.9% Deployed 61-90 days, 16.2% Deployed 91 days or longer.

e. *Number of years of Active Federal Service (AFS) completed.* The distribution of responses was 51.6% 5 years or less, 30.4% 6-10 years, 9.9% 11-15 years, 6.2% 16 years or longer.

f. *Number of years of Active Service in the Army Nurse Corps.* The distribution of responses was 63.3% 5 years or less, 24.3% 6-10 years, 8.0% 11-15 years, 3.6% 16 years or longer.

g. *Rank.* The distribution of responses was 9.3% 1LT, 79.5% CPT, 9.3% MAJ, 1.2% LTC.

h. *Race*. The distribution of responses was 7.5% African-American, 1.9% Asian and Pacific Islander, 3.1% Hispanic, 83.9% White and 1.9% other.

i. *Dependent Children.* The distribution of responses was 43.5% Yes, 52.2% No.

j. *Area of Concentration (AOC).* The distribution of responses was 1.9% Psychiatric Nurse (66C), 12.4% Perioperative Nurse (66E), 13% Nurse Anesthetist (66F), and 68.3% Medical-Surgical Nurse (66H).

k. *Additional Skill Identifiers (ASI).* The distribution of responses was 18.6% Critical-Care Nurse (8A), 1.9% Community Health Nurse (8F), 14.3% OB-Gyn Nurse (8G), 3.1% Nurse-Educator (5K), 3.1% Family Nurse Practitioner (8E), 6.2% Emergency Room Nurse (M5), and 5% others

2. Original Career Intentions.
    a. Pay back initial obligation and then leave active duty, 21.7%
    b. Become a career officer and stay at least 20 years (retirement), 28.6%
    c. Stay in as long as active duty met my needs, 42.9%
    d. Other, 6.2%

Based on this result, over 70 percent of the officers surveyed intended to stay in the military for a long period of time, such as to become a career officer (28.6%), and to stay in as long as active duty met my needs (42.9%). However, for a variety of reasons, these officers ended up leaving the military.

3. Reasons for Leaving. Part 2 of the survey questionnaire summarizes the results of the responses to the Reasons for Leaving (Likert-Scale Questions). There are 57 questions given to the participants and these questions are broken down into categories Family Issues (Questions 1-13), Pay and Benefits (Questions 14-16), Work Environment/Job in General (Questions 17-35), Career and Promotion (Questions 36-44), Quality of Life (Questions 45-52), and OPTEMPO/PERSTEMPO (Questions 53-57).

a. Family Issues

Table 7. Family Issues

Reasons for Leaving	**Mean Rank**
RL1: Not enough time with my family	10.45
RL10: Too much time away from home	8.53
RL9: Desire to stabilize family in one	8.51

geographical location	
RL12: Likelihood of assignment that excludes family	8.35
RL7: Separation from extended family (parents, grandparents, siblings, etc)	8.20
RL8: Difficulty starting a family while on active duty	7.33
RL13: Family/spouse dissatisfaction with Army life	6.83
RL11: Want to stay at home with my children	6.59
RL2: Inadequate child care availability	5.99
RL4: Lack of employment opportunities for spouse	5.55
RL3: Difficulty being assigned with active duty spouse	5.37
RL6: Disruption in child(ren)'s education	5.07
RL5: Lack of educational opportunities for spouse	4.21

RL1: "Not enough time with my family". Overall, 52% rated this as extremely important, and 23% rated this as moderately important. This 75% favorable response met the standard.

RL10: "Too much time away from home". Overall, 25% rated this as extremely important, and 25% rated this as moderately important. This 50% favorable response met the standard.

RL9: "Desire to stabilize family in one geographical location." Overall, 42% rated this as extremely important, and 14% rated this as moderately important. This 56% favorable response met the standard.

RL12: "Likelihood of assignment that excludes family." Overall, 35% rated this as extremely important, and 18% rated this as moderately important. This 53% favorable response met the standard.

Based on the results, respondents are concerned about the increased amount of time they spent away from their loved ones. They are seeking jobs that will provide them more time to spend with their family and at the same time reduce the frequency of moving around. Several officers indicated their preferences to homestead to allow their spouses to have more career stability.

b. Pay and Benefits

Table 8. Pay and Benefits

Reasons for Leaving	**Mean Rank**
RL16: Lack of retention/specialty pay	2.49
RL14: Inadequate base pay	1.80
RL15: Inadequate housing allowance	1.72

RL16: "Lack of retention/specialty pay." Overall, 39% rated this as extremely important, and 18% rated this as moderately important. This 57% favorable response met the standard.

Even though the Army Nurse Corps offers specialty pay and bonuses to nurses, this incentive is not given across the board. Only certain specialties, such as nurse anesthetists, nurse practitioners, operating room nurses receive specialty pay. Other specialties, such as critical care nurses, do not receive specialty pay despite the shortage in this specialty. Many civilian hospitals offer bonuses and special incentive pay to attract critical care nurses, particularly former military nurses.

c. Work Environment / Job in General

Table 9. Work Environment / Job in General

Reasons for Leaving	Mean Rank
RL32: No compensation for extra hours worked	13.87
RL22: Poorly managed time schedules	11.96
RL24: No control over time schedule	11.82
RL23: Schedule inequity between civilian and military personnel	11.75
RL18: Not enough RN staff to provide quality patient care	11.70
RL17: Too many non-nursing tasks left to nursing	11.68
RL25: Poor management skills at the head nurse level	11.35
RL26: Uncaring nurse administrators	11.22
RL33: Poor morale in work area	11.13
RL28: Lack of communication within the organization	10.97
RL31: Working multiple shifts in one week	10.25
RL19: Inadequate control over nursing practice	10.23
RL30: Working long stretches	9.73
RL34: Too much stress on the job	9.45
RL29: Working too many consecutive shifts	8.78
RL20: Patient safety concerns	8.47
RL35: Too many personnel to supervise	5.43
RL27: Poor working relationships with physicians	5.20
RL21: Inadequate preparation for current assignment	5.01

RL32: “No compensation for extra hours worked.” Overall, 50% rated this as extremely important, and 17% rated this as moderately important. This 67% favorable response met the standard.

RL22: “Poorly managed time schedules.” Overall, 27% rated this as extremely important, and 26% rated this as moderately important. This 53% favorable response met the standard.

RL24: “No control over time schedule.” Overall, 28% rated this as extremely important, and 23% rated this as moderately important. This 51% favorable response met the standard.

RL23: “Schedule inequity between civilian and military personnel.” Overall, 35% rated this as extremely important, and 20% rated this as moderately important. This 55% favorable response met the standard.

RL26: “Uncaring nurse administrators.” Overall, 29% rated this as extremely important, and 21% rated this as moderately important. This 50% favorable response met the standard.

Military nurses usually work more than 40 hours per week and do not receive compensation for the extra hours they put in. They spend most of their time taking care of patients, and still are required to fulfill military readiness requirements such as weapons qualifications, common task testing, physical fitness training, and others. It is not unusual for an Army Nurse Corps officer to spend an additional 12 hours per pay period to meet the mandatory military training requirements and additional tasking. Also, nurses are required to meet certification requirements such as Cardio-Pulmonary Resuscitation certification, Advanced Cardiac Life Support certification, continuing education requirements, etc. to meet their licensure recertification requirements.

Military hospitals have limited budget for civilian nursing overtime pay. As a result, the military nurses are usually put on-call on their days off to work extra hours

when the unit staffing is inadequate and/or staff members call in sick. Civilian nurses get paid overtime for extra hours work, and this create dissatisfaction and discontent among military nurses.

d. Career / Promotion

Table 10. Career / Promotion

Reasons for Leaving	Mean Rank
RL40: Insufficient recognition for a job well done	6.55
RL37: Lack of mentoring	6.23
RL42: The desire to explore other career options	5.46
RL36: Career development opportunities are lacking	5.11
RL43: Inadequate preparation for leadership positions	5.07
RL44: Lack of variety in nursing assignments	4.44
RL39: No or limited opportunities to obtain an advanced degree in nursing	4.29
RL38: No or limited opportunities to attend nursing specialty courses (ICU, Community Health, etc)	3.94
RL41: Inadequate opportunities for promotion	3.92

Junior officers think that they are not given recognition for a job well done (6.55) and that the “zero-defect” mentality still exists in the Army. Risk aversion has become the military cultural norm, and commanders are not willing to take risks and fail. As a result, there is lack of empowerment towards company-grade officers. Junior officers

complained about the lack of mentorship and the bosses being "too busy," with no face-to-face interaction and counseling with individual soldiers.

e. Quality of Life

Table 11. Quality of Life

Reasons for Leaving	Mean Rank
RL47: Wanting more control over my life	7.23
RL46: Not having continuity with health care providers	4.92
RL50: Incompatibility with the military lifestyle	4.65
RL49 Inadequate or lack of timely housing availability	4.16
RL48: Perceived harassment from my chain of command	4.15
RL45: Limited access to health care	4.14
RL51: Difficulty meeting the Army's weight standards	3.43
RL52: Difficulty meeting APFT requirements	3.33

RL47: "Wanting more control over my life." Overall, 58% rated this as extremely important, and 19% rated this as moderately important. This 77% favorable response met the standard.

The issue of quality of life is important in retention and recruitment of Army Nurse Corps officers. Based on the survey, respondents ranked "*wanting more control over my life*" as the most important reason for leaving the military on this category (especially mandatory overtime and on-call). Some Army Nurse Corps officers feel "powerless" and think that they "do not have control over their lives."

f. OPTEMPO/PERSTEMPO

Table 12. OPTEMPO / PERSTEMPO

Reasons for Leaving	Mean Rank
RL57: High likelihood of deployment	3.88
RL53: No or limited opportunities to have input into my assignments	3.35
RL55: Number of days away from home due to TDY's, field training, etc.	2.76
RL54: Too frequent PCSs	2.60
RL56: Too much time previously deployed	2.41

RL57: "High likelihood of deployment." Overall, 37% rated this as extremely important, and 15% rated this as moderately important. This 52% favorable response met the standard.

"*High likelihood of deployment*" has been one of the biggest factors affecting retention and recruitment of Army Nurse Corps officers. Due to the increase in OPTEMPO, the likelihood of deployment for many Army Nurse Corps officers is inevitable. Recently, the Army released a report stating that it missed its recruiting targets in March and April because of the prospect of combat-zone deployment in Iraq discourages potential recruits.

g. What made respondents FIRST THINK about leaving (top 12 responses). The results were obtained from the responses the exit questionnaire (question number 58).

Table 13. What Made Respondents *First Think* About Leaving Active Duty?

Reasons for Leaving	Frequency	Percentage
RL57: High likelihood of deployment	13	8.1%
RL47: Wanting more control over my life	11	6.8%
RL1: Not enough time with my family	9	5.6%
RL8: Difficulty starting a family while on active duty	9	5.6%
RL11: Want to stay home with my children	9	5.6%
RL25: Poor management skills at the head nurse level	9	5.6%
RL7: Separation from extended family (parents, grandparents, siblings, etc.)	7	4.3%
RL9: Desire to stabilize family in one geographical location	7	4.3%
RL3: Difficulty being assigned with active duty spouse	6	3.7%
RL4: Lack of employment opportunities for spouse	5	3.1%
RL12: Likelihood of assignment that excludes family	5	3.1%
RL26: Uncaring nurse administrators	5	3.1%

"High likelihood of deployment" topped the list for the reason that made these officers first think about leaving active duty. Many Army nurses expressed apprehension about deployment especially to Iraq and Afghanistan. The responses also reflect the respondents desire to spend more time with their families and are seeking more stability with their loved ones.

h. MOST IMPORTANT reason for leaving active duty (top 14 responses). The results were obtained from the responses the exit questionnaire (question number 59).

Table 14. *Most Important* Reasons for Leaving Active Duty

Reasons for Leaving	Frequency	Percentage
RL57: High likelihood of deployment	17	10.6%
RL47: Wanting more control over my life	16	9.9%
RL9: Desire to stabilize family in one geographical location	13	8,1%
RL8: Difficulty starting a family while on active duty	12	7.5%
RL11: Want to stay home with my children	12	7.5%
RL1: Not enough time with my family	10	6.2%
RL7: Separation from extended family (parents, grandparents, siblings, etc.)	9	5.6%
RL3: Difficulty being assigned with active duty spouse	5	3.1%
RL23: Schedule inequity between civilian and military personnel	5	3.1%
RL25: Poor management skills at the head nurse level	5	3.1%
RL53: No or limited opportunities to have input into my assignment	5	3.1%
RL12: Likelihood of assignment that excludes family	4	2.5%
RL18: Not enough RN staff to provide quality patient care	4	2.5%
RL50: Incompatibility with the military lifestyle	4	2.5%

Once again, "*High likelihood of deployment"* was selected as the most important reason why the respondents left active duty. The respondents are seeking more control with their lives and wish to spend more time with their families and loved ones.

4. Future Plans. This is part 3 of the survey questionnaire and this section focuses on the plans of the respondents once they leave active duty.

a. *Next employment.* In the distribution of responses 85.1% indicated that their next employment would be in nursing, 5.6% in a different career field.

b. *I expect my next employment to provide (indicate all that apply):* The distribution of responses was 40.4% Higher base pay, 47.2% better work environment, 13% better benefits, 18.6% better long-term career, 25.5% better long-term financial rewards, 45.3% better location, 23.6% more interesting work, 75.8% better lifestyle.

c. *Next job will be.* The distribution of responses was 54.7% in civilian facility, 18% in DOD facility, 17.4% other.

d. *Intention to enter the US Army Reserves.* The distribution of responses was 44.1% Yes, and 47.2% No. Of those respondents who answered Yes, 28.8% will enter Active Reserves and 71.2 will enter Inactive Reserves.

e. *Upon leaving active duty, I intend to work as a contract nurse.* The distribution of responses was 52.8% No and 39.8% Yes.

f. *Upon leaving active duty, I intend to attend graduate school.* The distribution of responses was 42.9% No, and 53.4% Yes.

g. *Did chain of command talk to respondent about staying?* The distribution of responses was 15.5% No, and 80.1% Yes.

h. *Overall, how satisfied were you with your time in the Army?* The distribution of responses was 3.7% Not Satisfied, 24.2% Somewhat Satisfied, 44.7% Satisfied, 21.7% Extremely Satisfied.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

Nurses are integral members of the multidisciplinary military health care system and their contributions are essential to the delivery of safe and effective care. In an article published by The Christian Science Monitor, Regan (2004) stated that a New England Journal of Medicine (NEJM) study concluded that the American troops survive wounds or injuries in Iraq at a higher rate than any previous American conflict. The NEJM study also added that "the medical system used to treat troops has improved dramatically, even since the first Gulf War 13 years ago" (Regan 2004). The high rate of soldiers' survival from combat injuries in Iraq is attributable to the hard work of the doctors, nurses, helicopter pilots, transport staff, and other health care workers as well as medical researchers in the AMEDD. The report, however, countered that the military medical system has been overwhelmed by the scope and severity of injuries occurring among the troops in Iraq (Schrader 2004). The military health care personnel in Iraq are working under difficult circumstances and sometimes are overwhelmed with the workload due to the lack of medical personnel available to care for the injured (Schrader 2004).

The shortage of nurses whether in the medical centers, MEDDACs, or field could lead to negative outcomes such as increased mortality rates, adverse events after surgery, increased incidence of patient violence against staff, increase accident rates and patient injuries, and increased cross infection rates (Buchan and Calman 2004). To retain these personnel and aid in the revitalization of military culture to these nurses, several steps were identified to reduce the attrition of nurses and to meet the need of the nurses. Senior

leaders in the United States Army have the authority to overturn the shortage of nurses in the military. However, this process will not happen overnight especially with the ongoing war in Iraq and Afghanistan. Factors such as increased pay and better retirement benefits can help mitigate the attrition of these personnel. However, these initiatives are only short-range solutions to an enormous manpower problem. The Army will not be able to man the force with competent, trained and qualified nurses without implementing innovative, competitive and aggressive institutional changes focused on rebuilding the military culture.

Primary Research Question: What factors influence the increased attrition of nurses in the United States Army Nurse Corps?

Junior officer attrition is a serious problem in the Army Nurse Corps. There are several factors that influenced this problem. Based on the exit survey, over 70 percent of the respondents had intended to stay on active duty longer than their initial obligation. However, these officers ended up leaving the military for various reasons. Factors such as deployment and increased operational tempo, lack of control over their lives, desire to stabilize their families in one geographical location, difficulty starting a family while on active duty, wanting to stay home with their children, not having enough time with their families and lack of compensation for extra hours worked are the primary reasons why Army Nurse Corps officers are leaving the military. Issues such as credibility of leaders, generational differences in leadership, and lack of mentorship also contribute to the attrition problem in the Army Nurse Corps.

Secondary Research Questions:

1. Do the current deployment and increased OPTEMPO have an effect in the recruitment and retention in the Army?

Based on the exit survey, respondents voted that "high likelihood of deployment" made them FIRST THINK about leaving active duty and also the MOST IMPORTANT reason for leaving active duty. The Washington Post published an article stating that the Army missed its recruiting targets in March and April 2005 because the "prospect of combat-zone deployments in Iraq discourages American youths – and adults who advise them – from considering military service" (Tyson 2005). According to LTG Franklin L. Hagenback, the Army's personnel chief, "the monthly recruiting figures from March and April will be difficult to achieve" (Tyson 2005). The report stated that deployment and increase OPTEMPO have a significant impact on recruitment and retention because they usually place added burdens on soldiers, primarily by taking them away from their home station, and causing an increase amount of disruption in the household (Polich and Sortor 2001). Given the current situation in Iraq and Afghanistan, this issue will continue to be a problem in the Army Nurse Corps unless the senior Army Nurse Corps leadership comes up with ways to persuade nurses to want to deploy in austere environments.

2. Do pay and benefits influence the Army Nurse Corps officers' decisions to stay in the military?

There were numerous comparisons of military and civilian compensation conducted to illustrate the military-civilian pay gap; however, many of these reports are proven inaccurate (Goldich 2004). In April 2002, the Manpower and Personnel Subcommittee of the Senate Armed Services Committee, General Accounting Office

(GAO) analysts examined the military benefits package and compared them with the private sector and concluded that the military benefits are generally comparable to the private sector (Goldich 2004). However, based on the exit survey results, the respondents ranked lack of retention/specialty pay as one of the top concerns. Only certain specialties in the Army Nurse Corps, such as Certified Registered Nurse Anesthetists (CRNAs), receive specialty bonuses. Military nurses also expressed concerns with the lack of compensation for their extra hours worked. Military nurses are often scheduled to work more than 40 hours per week and/or placed on mandatory on-call status. These extra hours worked are oftentimes perceived by many military nurses as lost opportunity to make extra money. In the civilian sector, nurses are paid overtime for hours worked above their scheduled time. These nurses can significantly make more money than what they normally receive on their regular base pay.

3. Does the current civilian nursing shortage have an impact in the recruitment and retention of Army Nurse Corps officers?

Recruitment and retention of Army nurses has been a big challenge due to the current civilian nursing shortage. According to COL Ann Richardson, USAREC chief nurse, the Army Nurse Corps continues to have a shortfall on recruitment numbers due to the national nursing shortage. Civilian hospitals offer generous sign-on bonuses, flexible work schedule, shift differential pay and other incentives that the Army does not offer. However, the Army Nurse Corps is now offering new incentives that may be considered comparable to the civilian sectors. Some of these incentives are discussed in the next question.

4. What can the senior Army Nurse Corps leadership do to prevent the attrition and increase recruitment of nurses in the Army Nurse Corps?

The Army Nurse Corps launched a series of immediate actions to offset the critical shortages of nurses. These actions included increasing the employment of civilian nurses to augment the shortage of military nurses. The use of these nurses provided some relief, however, it also resulted in the dissatisfaction of the military nurses because the military nurses still has to provide coverage with the staffing shortage, be on-call, whenever the civilian nurse call in sick. The military nurses do not get extra pay for working overtime. Additionally, they rarely get compensatory time off for extra hours of work.

In the March 2005 issue of the Army Nurse Corps newsletter, Major General Pollock, chief of the Army Nurse Corps, announced the changes to the FY05 CRNA incentive specialty pay. There are now one-, two-, three-, and four-year contracts available for the CRNAs, as opposed to the one contract previously available for them. The previous program gave Army Nurse Anesthetists who have completed their initial service obligation $15,000 annually. Nurse anesthetists who have not completed their service obligation are authorized $6,000 annually.

Family Nurse Practitioners (FNP) or certified nurse-midwife will continue to receive special pay that can range from $2,000 to $5,000 annually. No incentive specialty pay has been announced for critical care and OB-Gyn nurses at this time.

The Health Professions Loan Repayment Program (HPLRP) is another program instituted by the Army Nurse Corps to retain its nurses. This program for active duty officers provides nearly $30,000 for repayment of educational loans for nurses.

Participants of this program incur a three-year active duty serving obligation (Richardson 2005). The U.S. Army Recruiting Command also offers a competitive incentive program to recruit civilian nurses to go on active duty. The nurse accession bonus program offers nurses a $15,000 bonus just for signing up. This bonus is paid for a four-year contract only. Individuals may also apply for both loan repayment and accession bonus. An $8,000 bonus is paid if combined with a loan repayment (U.S. Army website 2005). Junior and senior nursing students in an accredited BSN program are also offered the opportunity to join the Army Nurse Corps and could earn a monthly stipend of $1,000 and a bonus of $10,000 ($5,000 at signing and $5,000 at completion).

The U.S. Army Chief of Staff, GEN Peter Schoomaker released a statement on 26 July 2004, outlining the Army Transformation plan that may significantly impact the retention and recruitment of Army soldiers. General Schoomaker stated that "while we are engaged in combat operations in both Iraq and Afghanistan, we are also transforming the force. We are changing the Army." The transformation process is concentrated on three primary avenues:

First, the force will be structured into modular formations and they will be called brigade combat teams (BCT), units of action. Secondly, the active component of the Army, the Army National Guard and the Army Reserve forces will be rebalanced while the transformation process is going on, and lastly, these forces will be stabilized. The ultimate goal of this process is to have a more cohesive and combat ready formations, more stability, and a more predictable lifestyle for the soldiers and their families. Currently, the Army is not optimized for the sustained deployment operations, so to

provide momentum and focus and resources to transform, we need to transform the Army (Schoomaker 2004).

According to GEN Schoomaker, the Army's plan is to grow the active component of the Army by 30,000 soldiers over the next three years, using supplemental dollars. This plan would cost the Army about $3.6 billion per year. To stabilize the Army, conversion of military spaces to civilian spaces that do not need to have soldiers will be done. As an example, in the installation management activity, there are 3,300 military positions that can be performed by civilian personnel. These positions will be converted to civilian positions, thus allowing us to take trained soldiers, and put them in places where they are needed to deploy. The Army is also looking at the force structure in Korea. Currently, forty percent of the soldiers go to Korea. Stabilization incentive was offered to soldiers in Korea and almost 8,000 soldiers have voluntarily extended their tours. This means for every one of these soldiers, there is at least one and in some cases two soldiers in the pipeline that are now stabilized (Schoomaker 2004).

Some government officials suggested reinstituting the "draft" process to reduce the shortage of military personnel during the Iraq and Afghanistan operations. In the U.S. history, only during the Vietnam conflict nurses were drafted for military service (Finfgeld 1991). Under a 1963 legislative act, 700 male nurses were drafted to meet the military nursing shortage. Army Secretary Francis J. Harvey and Army Chief of Staff, GEN Peter Schoomaker opposed to the draft idea (Tyson 2005; Schoomaker 2004). Dr. Lawrence Korb of the Reserve Officers Association (2005) argued that returning to the draft would not answer the manpower and capability problems the Army is currently facing. Dr. Korb explained that the draft Army is not well suited to today's challenges

because “the overall experience and education level would decline.” Dr. Korb also added that “a mixed force of draftees and volunteers is more expensive because there would be more turnover and therefore much higher training cost” (Korb 2005). Reinstituting the draft would also send the wrong signal to our NATO allies because most of them have abolished their draft based on our suggestion (Korb 2005).

This paper discussed the problem with deployment, lack of incentive pay, lack of compensation for extra hours work as factors in attrition. Deployments have always been a way of life in the military, and will not go away anytime soon. However, as leaders, we should prepare our Soldiers (nurses) so they are ready when they will be needed for deployment. Part of the apprehension with deployment is the lack of deployment training. Most Army nurses are assigned to TDA facilities (MEDCENs, MEDDACs, staff positions) and they are less exposed to operational environments, and spend too little or no time in the field environment. Additionally, the training given by some TDA facilities, such as common task training (CTT), weapons qualifications, physical fitness, are inadequate or ill suited for real-life situations. Deployment training and preparation for military medical personnel needs to be revised and improved to reflect realistic training on the current operations. Other solutions are instilling unit cohesion and pride, officer professional development, study of a variety of deployment experiences (lessons learned), and critical incident stress debriefing (CISD).

Other intangible factors that affect retention of the Army Nurse Corps officers are the senior leaderships’ lack of understanding of subordinates, perceived lack of credibility held by the Generation Xers for the Baby Boomer leadership, and the subordinates’ perception that the senior leadership does not understand them and does not

care to understand them (Lamson 2002). Leadership is an intricate and sensitive aspect of officer retention and/or attrition.

In a research project titled "The Career Officer Attrition Dilemma: An Underlying Cause" (Lamson 2002), Lamson stated that "military leaders tend to have a straight forward, dictatorial leadership style." According to Lamson, "Leaders tell their subordinates what to do and, although most leaders deny it, they also dictate how to do it." Junior officers perceived this as micromanagement and it causes frustration and anger towards their leaders. To overcome this generational problem, Lamson utilized a model created by Zemke, Raines, and Filipczak called "The ACORN Imperatives." This model used five common traits that have been proven successful in developing highly integrated cross-generational workforces (Lamson 2002).

1. Accommodate employee differences – it is important to consider that every individual is different from one another. A single soldier may have different needs compared to someone who has a big family. The Army Married Couples program is an excellent program to help increase the retention rate.

2. Create workplace choices – studies have shown that employees' productivity increases when they have input into their work environment. Although it is difficult to enforce in the military, subordinates can have input into their work place that can significantly impact job satisfaction. Programs, such as self-schedule, flexible work schedule, and unit awards programs, are proven to make employees satisfied in their jobs.

3. Operate from a sophisticated management style – Zemke, Raines and Filipczak suggested that successful managers "operate with a certain finesse, tend to be more direct, and give those who report to them the big picture, specific goals and measures,

then turn their people loose – giving them feedback, reward and recognition as appropriate" (Lamson 2002). This leadership style further removes the zero-defect mentality inherent in the military and allows empowerment towards subordinate leaders.

4. Respect and competence initiative – all leaders in the Army must recognize that every individual has something good to offer to the organization, and they must be encouraged to do the best possible job. Removing the zero-defect mentality will help subordinate staff to exercise initiative and improve their competence in their specialties.

5. Nourish retention – most Army Nurse Corps officers joined the military with the intention of staying past their initial obligation. Senior leaders must understand and try to work with individual officers and help them achieve success in the military. This may not be possible for everyone, but making sincere effort in helping our junior officers would definitely make a big difference. Organizations that truly understand its people are the ones that succeed in the long run.

Another way to help retain junior officers in the military is through the mentorship program. According to VCSA, General John Keane, "the legacy that the best unit commanders leave is not how well they run their organizations, it is their investment in their youngsters--their soldiers, their sergeants, their officers and their personal growth and development" (Naylor 2000). In a research paper written by Lieutenant Colonel Matthew Hale titled "Mentoring Junior Leaders: Leadership Tools for Our 21st Century Army" (2001), he contends that if mentorship is practiced by battalion commanders, we can expect significant benefits to those mentored. Hale indicated that "junior officers reap the benefits of mentorship, and then they accelerate the benefits of mentoring through newfound confidence and increasing competence, now visible throughout the battalion."

Mentorship is needed in the Army, as indicated in the Army Blue Ribbon Panel. According to Hale, when battalion commanders invest time in mentoring junior officers, "the junior officers understand the organizational structure, environmental dynamics, and personalities that contribute to better decision-making abilities" (Hale 2001). Mentorship results in numerous benefits for the Army such as producing future leaders that are more confident, better educated, and more satisfied with their work and career progress (Hale 2001).

Additionally, mentored junior officers are more receptive to accepting Army goals, mores and objectives, which yield to a greater sense of belonging and acceptance in the organization (Hale 2001).

Areas for Future Research

The issue of Army Nurse Corps officers' attrition will continue to be a challenge in the Army. As the United States military continues to fight against Global War on Terrorism, nurses will continue to play a big role in caring for Soldiers and ensuring that they are back in a state of readiness. With the ongoing shortage of nurses in the civilian sector, the Army will have to continue to compete with civilian organizations in the retention and recruitment of nurses.

During the course of this research, there were several branches that may allow for future researchers to study. These topics include:

1. A survey of all active duty Army Nurse Corps officers to find out the reasons for their decision to stay or leave the military. This study may provide the Army with insight on what motivates Army Nurse Corps officers to stay in the military. Family and work environment issues, pay and benefits, realistic operational training and education,

leadership and mentorship are important in the lives of Army Nurse Corps officers and play critical roles in the retention and recruitment of nurses.

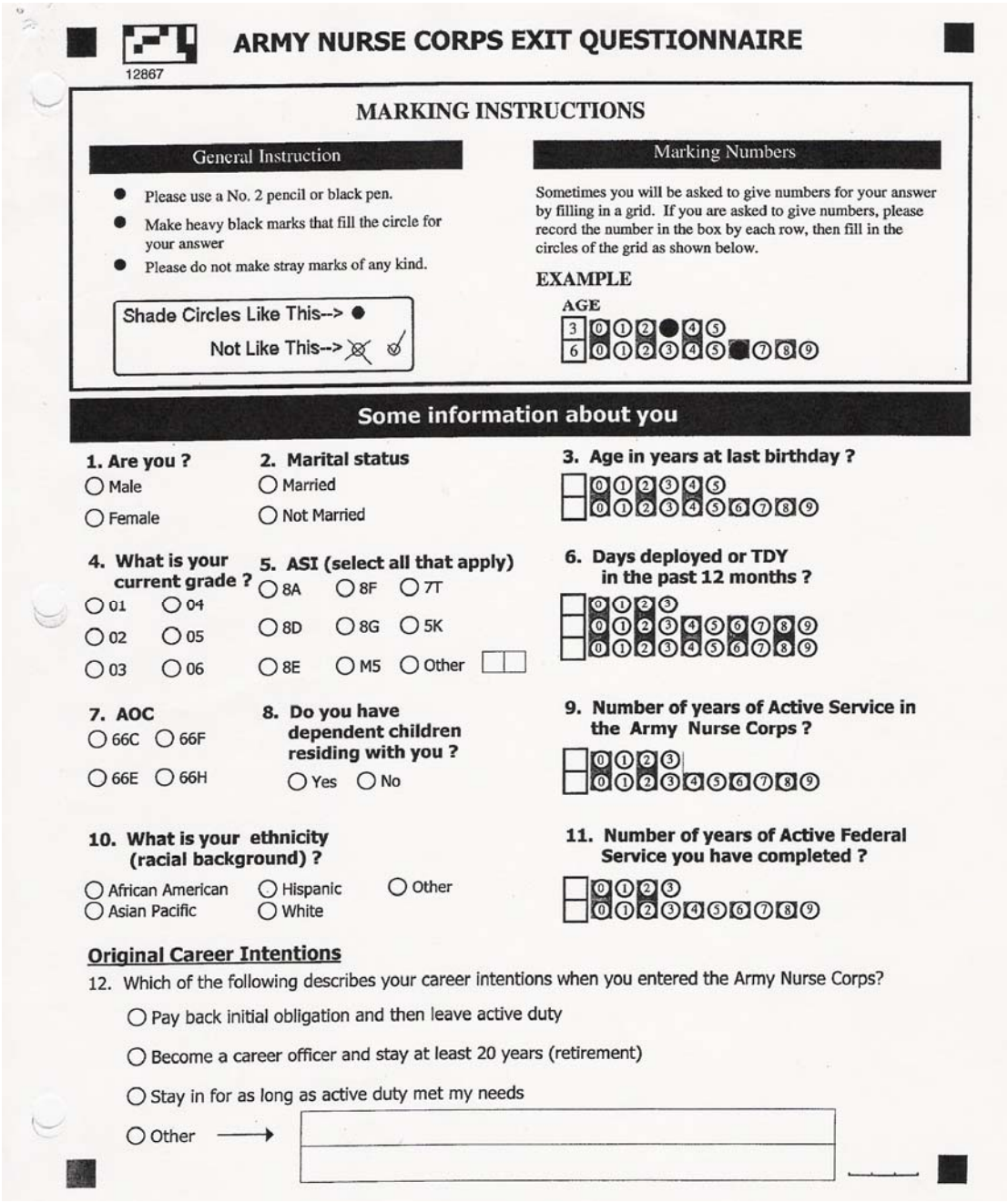
2. Further investigation of family/spousal influence, assignment preferences, and specialty assignments, length of assignment, deployment, and incentive specialty pay is suggested to help identify ways to retain Army Nurse Corps officers.

3. The impact of the new, and transformed Army is worthy of a study. As the Army is undergoing major transformation process, it would be interesting to see if this change helps reduce the attrition problem, or if the nursing shortage in the United States Army continues.

4. In response to the lessons learned in support of OIF and OEF, the Army has implemented the Warrior Ethos tasks and drills as part of the sustainment training for Basic Combat Training. Additionally, the Ranger Course is now open to Combat Service Support Soldiers and nurses that meet the eligibility criteria. A study of all combat training for nurses may provide insights into its impact on retention and recruitment.

APPENDIX A

ARMY NURSE CORPS EXIT QUESTIONNAIRE



ARMY NURSE CORPS EXIT QUESTIONNAIRE

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MARKING INSTRUCTIONS

General Instruction

- Please use a No. 2 pencil or black pen.
- Make heavy black marks that fill the circle for your answer
- Please do not make stray marks of any kind.

Shade Circles Like This--> ●

Not Like This--> ⊗ ✓

Marking Numbers

Sometimes you will be asked to give numbers for your answer by filling in a grid. If you are asked to give numbers, please record the number in the box by each row, then fill in the circles of the grid as shown below.

EXAMPLE

AGE

3 0 1 2 ● 4 5

6 0 1 2 3 4 5 ● 7 8 9

Some information about you

1. Are you ?
- ○ Male
- ○ Female

2. Marital status
- ○ Married
- ○ Not Married

3. Age in years at last birthday ?

0 1 2 3 4 5

0 1 2 3 4 5 6 7 8 9

4. What is your current grade ?
- ○ 01 ○ 04
- ○ 02 ○ 05
- ○ 03 ○ 06

5. ASI (select all that apply)
- ○ 8A ○ 8F ○ 7T
- ○ 8D ○ 8G ○ 5K
- ○ 8E ○ M5 ○ Other ☐☐

6. Days deployed or TDY in the past 12 months ?

0 1 2 3

0 1 2 3 4 5 6 7 8 9

0 1 2 3 4 5 6 7 8 9

7. AOC
- ○ 66C ○ 66F
- ○ 66E ○ 66H

8. Do you have dependent children residing with you ?
- ○ Yes ○ No

9. Number of years of Active Service in the Army Nurse Corps ?

0 1 2 3

0 1 2 3 4 5 6 7 8 9

10. What is your ethnicity (racial background) ?
- ○ African American ○ Hispanic ○ Other
- ○ Asian Pacific ○ White

11. Number of years of Active Federal Service you have completed ?

0 1 2 3

0 1 2 3 4 5 6 7 8 9

Original Career Intentions

12. Which of the following describes your career intentions when you entered the Army Nurse Corps?

- ○ Pay back initial obligation and then leave active duty
- ○ Become a career officer and stay at least 20 years (retirement)
- ○ Stay in for as long as active duty met my needs
- ○ Other →

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Reasons for Leaving

The following section lists reasons for leaving active duty military nursing. Please indicate how important each of the following reasons was in your decision to leave active duty.

	Importance to my leaving active duty				
	Not important at all				Extremely important
Family Issues	**0**	**1**	**2**	**3**	**4**
1. Not enough time with my family	○	○	○	○	○
2. Inadequate child care availablity	○	○	○	○	○
3. Difficulty being assigned with active duty spouse	○	○	○	○	○
4. Lack of employment opportunities for spouse	○	○	○	○	○
5. Lack of educational opportunities for spouse	○	○	○	○	○
6. Disruption in child(ren)'s education	○	○	○	○	○
7. Separation from extended family (parents, grandparents, siblings, etc.)	○	○	○	○	○
8. Difficulty starting a family while on active duty	○	○	○	○	○
9. Desire to stabilize family in one geographical location	○	○	○	○	○
10. Too much time away from home	○	○	○	○	○
11. Want to stay at home with my children	○	○	○	○	○
12. Likelihood of assignment that excludes family	○	○	○	○	○
13. Family/spouse dissatisfaction with Army life	○	○	○	○	○
Pay and Benefits					
14. Inadequate base pay	○	○	○	○	○
15. Inadequate housing allowance	○	○	○	○	○
16. Lack of retention/specialty pay	○	○	○	○	○
Work environment/job in general					
17. Too many non-nursing tasks left to nursing	○	○	○	○	○
18. Not enough RN staff to provide quality patient care	○	○	○	○	○
19. Inadequate control over nursing practice	○	○	○	○	○
20. Patient safety concerns	○	○	○	○	○
21. Inadequate preparation for current assignment	○	○	○	○	○

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22. Poorly managed time schedules	O	O	O	O	O
23. Schedule inequity between civilian and military personnel	O	O	O	O	O
24. No control over time schedule	O	O	O	O	O
25. Poor management skills at the head nurse level	O	O	O	O	O
26. Uncaring nurse administrators	O	O	O	O	O
27. Poor working relationships with physicians	O	O	O	O	O
28. Lack of communication within the organization	O	O	O	O	O
29. Working too many consecutive shifts	O	O	O	O	O
30. Working long stretches	O	O	O	O	O
31. Working multiple shifts in one week	O	O	O	O	O
32. No compensation for extra hours worked	O	O	O	O	O
33. Poor morale in work area	O	O	O	O	O
34. Too much stress on the job	O	O	O	O	O
35. Too many personnel to supervise	O	O	O	O	O

Career and Promotion

36. Career development opportunities are lacking	O	O	O	O	O
37. Lack of mentoring	O	O	O	O	O
38. No or limited opportunities to attend nursing specialty courses (ICU, Community Health, etc)	O	O	O	O	O
39. No or limited opportunities to obtain an advanced degree in nursing	O	O	O	O	O
40. Insufficient recognition for a job well done	O	O	O	O	O
41. Inadequate opportunities for promotion	O	O	O	O	O
42. The desire to explore other career options	O	O	O	O	O
43. Inadequate preparation for leadership positions	O	O	O	O	O
44. Lack of variety in nursing assignments	O	O	O	O	O

Quality of Life

45. Limited access to health care	O	O	O	O	O
46. Not having continuity with health care providers	O	O	O	O	O
47. Wanting more control over my life	O	O	O	O	O
48. Perceived harassment from my Chain of Command	O	O	O	O	O
49. Inadequate or lack of timely housing availability	O	O	O	O	O
50. Incompatibility with the military lifestyle	O	O	O	O	O
51. Difficulty meeting the Army's weight standards	O	O	O	O	O
52. Difficulty meeting APFT Requirements	O	O	O	O	O

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OPTEMPO/PERSTEMP

53. No or limited opportunities to have input into my assignments	○	○	○	○	○
54. Too frequent PCSs	○	○	○	○	○
55. Number of days away from home due to TDY's, field training, etc	○	○	○	○	○
56. Too much time previously deployed	○	○	○	○	○
57. High likelihood of deployment	○	○	○	○	○

Other reasons for leaving active duty

58. Which one of the items above (1-57) made you **FIRST THINK** about leaving active duty ?

□ 0 1 2 3 4 5
□ 0 1 2 3 4 5 6 7 8 9

59. Which one of the items above (1-57) is the **MOST IMPORTANT** reason for your leaving active duty ?

□ 0 1 2 3 4 5
□ 0 1 2 3 4 5 6 7 8 9

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Future Plans

1. My next employment will be: _____ (position/title).

- ○ in nursing
- ○ in a different career field

2. I expect my next employment to provide: Please indicate all that apply

- ○ Higher base pay
- ○ Better benefits
- ○ Better long-term financial rewards
- ○ More interesting work
- ○ Better work environment
- ○ Better long-term career
- ○ Better location
- ○ Better lifestyle

3. My next job will be in a:

- ○ Civilian healthcare facility
- ○ DoD healthcare facility
- ○ Other _____

4. I intend to enter the US Army Reserves

- ○ Yes
- ○ No

If yes

- ○ enter Active Reserves
- ○ enter Inactive Reserves

5. Upon leaving active duty, I intend to work as a contract nurse

○ Yes ○ No

6. Upon leaving active duty, I intend to attend graduate school

○ Yes ○ No

7. What could the Army Nurse Corps have done to keep you from leaving ?

8. Did anyone in your Chain of Command talk to you about staying ? ○ Yes ○ No

9. Overall, how satisfied were you with your time in the Army ?

○ Not satisfied ○ Somewhat satisfied ○ Satisfied ○ Extremely satisfied

10. Additional Comments

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE

APPENDIX B

ARMY NURSE CORPS EXIT SURVEY RAW RESULTS

Family Issues

Reason for Leaving	Not Important	Moderately Unimportant	Neither Important nor Unimportant	Moderately Important	Extremely Important
RL1: Not enough time with my family	5	5	16	23	52
RL10: Too much time away from home	15	17	18	25	25
RL9: Desire to stabilize family in one geographical location	24	11	9	14	42
RL12: Likelihood of assignment that excludes family	23	11	13	18	35
RL7: Separation from extended family	19	12	21	20	27
RL8: Difficulty starting a family while on active duty	36	14	7	12	31
RL13: Family/spouse dissatisfaction with Army life	38	13	15	15	19
RL11: Want to stay at home with my children	43	9	13	10	25
RL2: Inadequate child care availability	55	8	11	12	15
RL4: Lack of employment opportunities for spouse	63	6	10	6	15
RL3: Difficulty being assigned with active duty spouse	71	3	2	4	20
RL6: Disruption in child(ren)'s education	65	4	9	12	9
RL5: Lack of educational opportunities for spouse	75	9	9	4	3

Family Issues

Reasons for Leaving	Mean Rank
RL1: Not enough time with my family	10.45
RL10: Too much time away from home	8.53
RL9: Desire to stabilize family in one geographical location	8.51
RL12: Likelihood of assignment that excludes family	8.35
RL7: Separation from extended family (parents, grandparents, siblings, etc)	8.20
RL8: Difficulty starting a family while on active duty	7.33
RL13: Family/spouse dissatisfaction with Army life	6.83
RL11: Want to stay at home with my children	6.59
RL2: Inadequate child care availability	5.99
RL4: Lack of employment opportunities for spouse	5.55
RL3: Difficulty being assigned with active duty spouse	5.37
RL6: Disruption in child(ren)'s education	5.07
RL5: Lack of educational opportunities for spouse	4.21

Pay and Benefits

Reason for Leaving	Not Important	Moderately Unimportant	Neither Important nor Unimportant	Moderately Important	Extremely Important
RL16: Lack of retention/specialty pay	21	7	15	18	39
RL14: Inadequate base pay	39	19	12	14	17
RL15: Inadequate housing allowance	39	19	15	16	11

Pay and Benefits

Reasons for Leaving	Mean Rank
RL16: Lack of retention/specialty pay	2.49
RL14: Inadequate base pay	1.80
RL15: Inadequate housing allowance	1.72

Work Environment

Reason for Leaving	Not Important	Moderately Unimportant	Neither Important nor Unimportant	Moderately Important	Extremely Important
RL32: No compensation for extra hours worked	13	7	13	17	50
RL22: Poorly managed time schedules	17	12	17	26	27
RL24: No control over time schedule	16	12	21	23	28
RL23: Schedule inequity between civ. and mil. personnel	22	9	14	20	35
RL18: Not enough RN staff to provide quality patient care	17	11	25	20	26
RL17: Too many non-nursing tasks left to nursing	17	11	23	23	26
RL25: Poor management skills at the head nurse level	20	13	17	18	31
RL26: Uncaring nurse administrators	19	13	18	21	29
RL33: Poor morale in work area	19	12	19	22	27
RL28: Lack of communication within the organization	22	14	19	19	26
RL31: Working multiple shifts in one week	27	14	21	17	22
RL19: Inadequate control over nursing practice	24	17	20	17	22
RL30: Working long stretches	25	18	22	18	17
RL34: Too much stress on the job	24	20	24	17	15
RL29: Working too many consecutive shifts	28	21	23	14	14
RL20: Patient safety concerns	30	23	19	14	14
RL35: Too many personnel to supervise	54	24	12	6	3
RL35: Too many personnel to	54	26	11	6	3

supervise					
RL21: Inadequate preparation for current assignment	58	20	14	3	5

Work Environment

Reasons for Leaving	Mean Rank
RL32: No compensation for extra hours worked	13.87
RL22: Poorly managed time schedules	11.96
RL24: No control over time schedule	11.82
RL23: Schedule inequity between civilian and military personnel	11.75
RL18: Not enough RN staff to provide quality patient care	11.70
RL17: Too many non-nursing tasks left to nursing	11.68
RL25: Poor management skills at the head nurse level	11.35
RL26: Uncaring nurse administrators	11.22
RL33: Poor morale in work area	11.13
RL28: Lack of communication within the organization	10.97
RL31: Working multiple shifts in one week	10.25
RL19: Inadequate control over nursing practice	10.23
RL30: Working long stretches	9.73
RL34: Too much stress on the job	9.45
RL29: Working too many consecutive shifts	8.78
RL20: Patient safety concerns	8.47
RL35: Too many personnel to supervise	5.43
RL27: Poor working relationships with physicians	5.20
RL21: Inadequate preparation for current assignment	5.01

Career and Promotion

Reason for Leaving	Not Important	Moderately Unimportant	Neither Important nor Unimportant	Moderately Important	Extremely Important
RL40: Insufficient recognition for a job well done	17	19	16	18	30
RL37: Lack of mentoring	23	16	15	17	29
RL42: The desire to explore other career options	38	12	14	12	23
RL36: Career development opportunities are lacking	36	14	18	16	16
RL43: Inadequate preparation for leadership positions	35	19	17	13	17
RL44: Lack of variety in nursing assignments	47	17	14	11	12
RL39: No or limited opportunities to obtain an advanced degree in nursing	50	16	14	8	12
RL38: No or limited opportunities to attend nursing specialty courses (ICU, Community Health, etc)	54	16	7	8	14
RL43: Inadequate preparation for leadership positions	48	22	16	9	5

Career and Promotion

Reasons for Leaving	**Mean Rank**
RL40: Insufficient recognition for a job well done	6.55
RL37: Lack of mentoring	6.23
RL42: The desire to explore other career options	5.46
RL36: Career development opportunities are lacking	5.11
RL43: Inadequate preparation for leadership positions	5.07
RL44: Lack of variety in nursing assignments	4.44
RL39: No or limited opportunities to obtain an advanced degree in nursing	4.29
RL38: No or limited opportunities to attend nursing specialty courses (ICU, Community Health, etc)	3.94
RL41: Inadequate opportunities for promotion	3.92

Quality of Life

Reason for Leaving	Not Important	Moderately Unimportant	Neither Important nor Unimportant	Moderately Important	Extremely Important
RL47: Wanting more control over my life	5	4	14	19	58
RL46: Not having continuity with health care providers	45	16	16	11	14
RL50: Incompatibility with the military lifestyle	48	16	13	11	12
RL49 Inadequate or lack of timely housing availability	63	13	8	6	11
RL48: Perceived harassment from my chain of command	61	11	9	7	11
RL45: Limited access to health care	59	17	12	6	5
RL51: Difficulty meeting the Army's weight standards	79	9	6	2	3
RL52: Difficulty meeting APFT requirements	80	10	6	2	2

Quality of Life

Reasons for Leaving	**Mean Rank**
RL47: Wanting more control over my life	7.23
RL46: Not having continuity with health care providers	4.92
RL50: Incompatibility with the military lifestyle	4.65
RL49 Inadequate or lack of timely housing availability	4.16
RL48: Perceived harassment from my chain of command	4.15
RL45: Limited access to health care	4.14
RL51: Difficulty meeting the Army's weight standards	3.43
RL52: Difficulty meeting APFT requirements	3.33

OPTEMPO

Reason for Leaving	Not Important	Moderately Unimportant	Neither Important nor Unimportant	Moderately Important	Extremely Important
RL57: High likelihood of deployment	25	13	10	15	37
RL53: No or limited opportunities to have input into my assignments	31	13	16	22	19
RL55: Number of days away from home due to TDY's, field training, etc.	47	17	15	11	9
RL54: Too frequent PCSs	52	18	12	11	7
RL56: Too much time previously deployed	61	17	8	6	8

OPTEMPO

Reasons for Leaving	Mean Rank
RL57: High likelihood of deployment	3.88
RL53: No or limited opportunities to have input into my assignments	3.35
RL55: Number of days away from home due to TDY's, field training, etc.	2.76
RL54: Too frequent PCSs	2.60
RL56: Too much time previously deployed	2.41

APPENDIX C

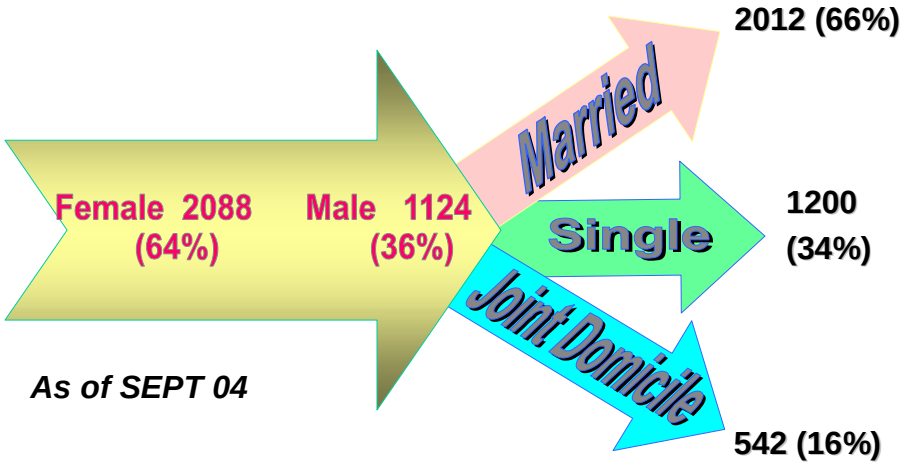
ARMY NURSE CORPS OFFICERS DEMOGRAPHICS

Average Age of AN officers

RANK	AGE
COL	51
LTC	47
MAJ	42
CPT	34
1LT	30
2LT	28
Overall Average Age = 37	

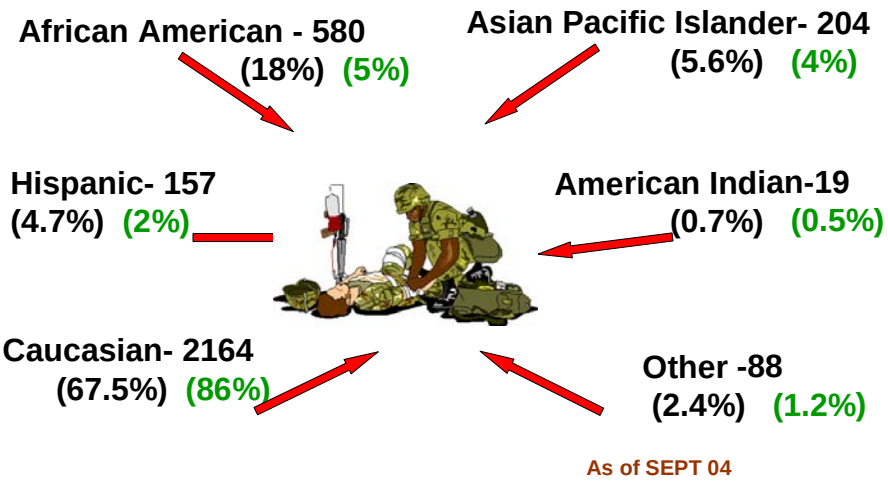
Source: Army Nurse Branch 2004.

Gender / Marital Status



Source: Army Nurse Branch 2004.

Ethnic Diversity of AN officers



Source: Army Nurse Branch 2004.

Highest CEL by Grade

	BSN	MS	PhD
COL		113	11
LTC		392	16
MAJ	267	465	1
CPT	920	173	
LT	881	8	

*CEL = Civilian Education Level

As of 1 JUNE 04

Promotion discriminator: Master's Degree for LTC

Source: Army Nurse Branch 2004.

Highest MEL By Grade

	OBC	ACCC	CAS3	CSC	SSC
COL				86	36
LTC		4	7	361	17
MAJ	7	182	192	297	
CPT	616	452	53	1	
LT	792	12			

As of 1JUNE 04

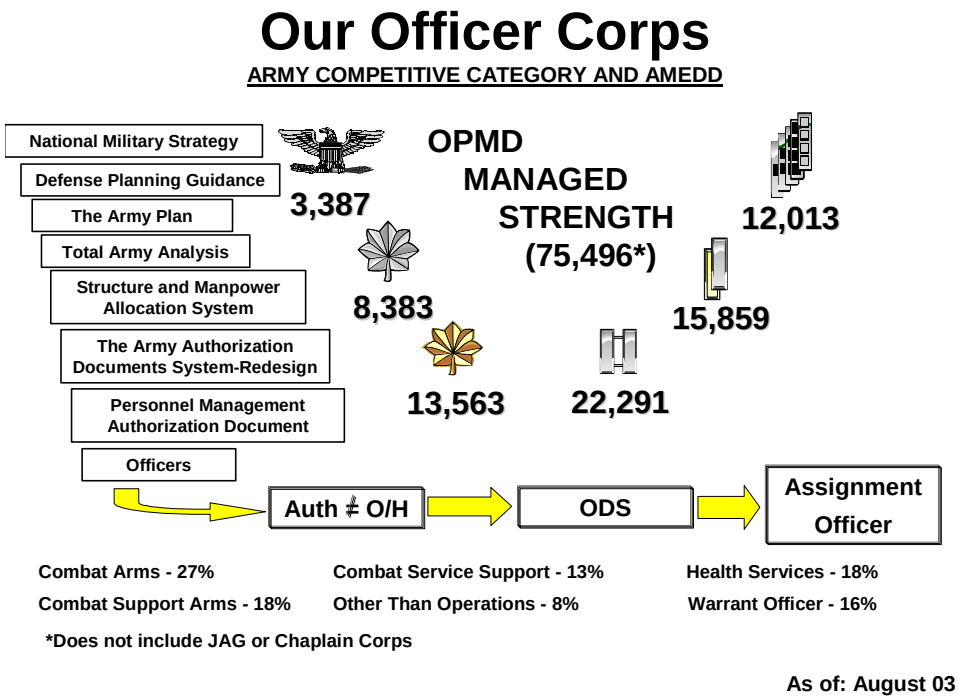
*MEL = Military Education Level

Promotion discriminator: ACCC to MAJ; CSC to LTC

Source: Army Nurse Branch 2004.

APPENDIX D

U.S ARMY OFFICER PERSONNEL STRENGTH



Source: Army Nurse Branch 2004.

AN Historical End Strength

FY	Inventory	BES
04	3212	3415
03	3238	3392
02	3152	3381
01	3219	3381
00	3244	3381
99	3283	3381
98	3312	3405
97	3523	3405

As of September 2004

Source: Army Nurse Branch 2004.

AMEDD 5-Year Capability Plan

Corps	FY02	FY03	FY04	FY05	FY06
MC	4347	4347	4347	4347	4347
DC	1138	1138	1139	1139	1139
VC	411	419	410	410	410
SP	909	930	945	945	945
AN	3381	3392	3415	3415	3415
MS	3912	3979	3971	3971	3971
WO	126	137	134	134	134
Total	14,224	14,342	14,342	14,361	14,361

Source: Army Nurse Branch 2004.

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